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APR 13 1968

CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

AS OF
APR. 1, 1968

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

| STATE | ADDRESS |
|--------------------|--|
| Alaska | P. O. Box "F", Palmer, Alaska 99645 |
| Arizona | 6029 Federal Building, Phoenix, Arizona 85205 |
| Colorado (N. Mex.) | 12417 Federal Building, Denver, Colorado 80202 |
| Idaho | P. O. Box 38, Boise, Idaho 83707 |
| Montana | P. O. Box 98, Bozeman, Montana 59715 |
| Nevada | P. O. Box 4850, Reno Nevada 89505 |
| Oregon | 1218 S. W. Washington St., Portland, Oregon 97205 |
| Utah | 4012 Federal Building, Salt Lake City, Utah 84111 |
| Washington | 360 Federal Office Building, Spokane, Washington 99201 |
| Wyoming | P. O. Box 340, Casper, Wyoming 82602 |

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

APRIL 8, 1968

Issued by

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ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.



Released by

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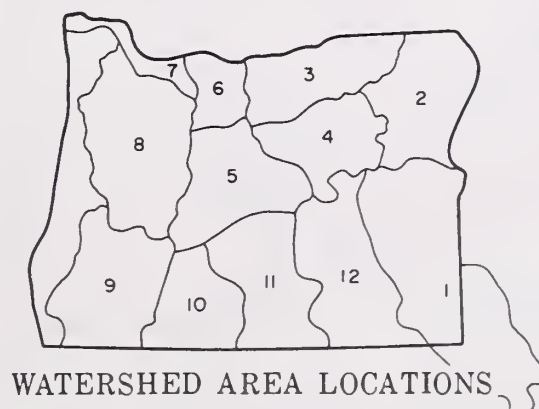
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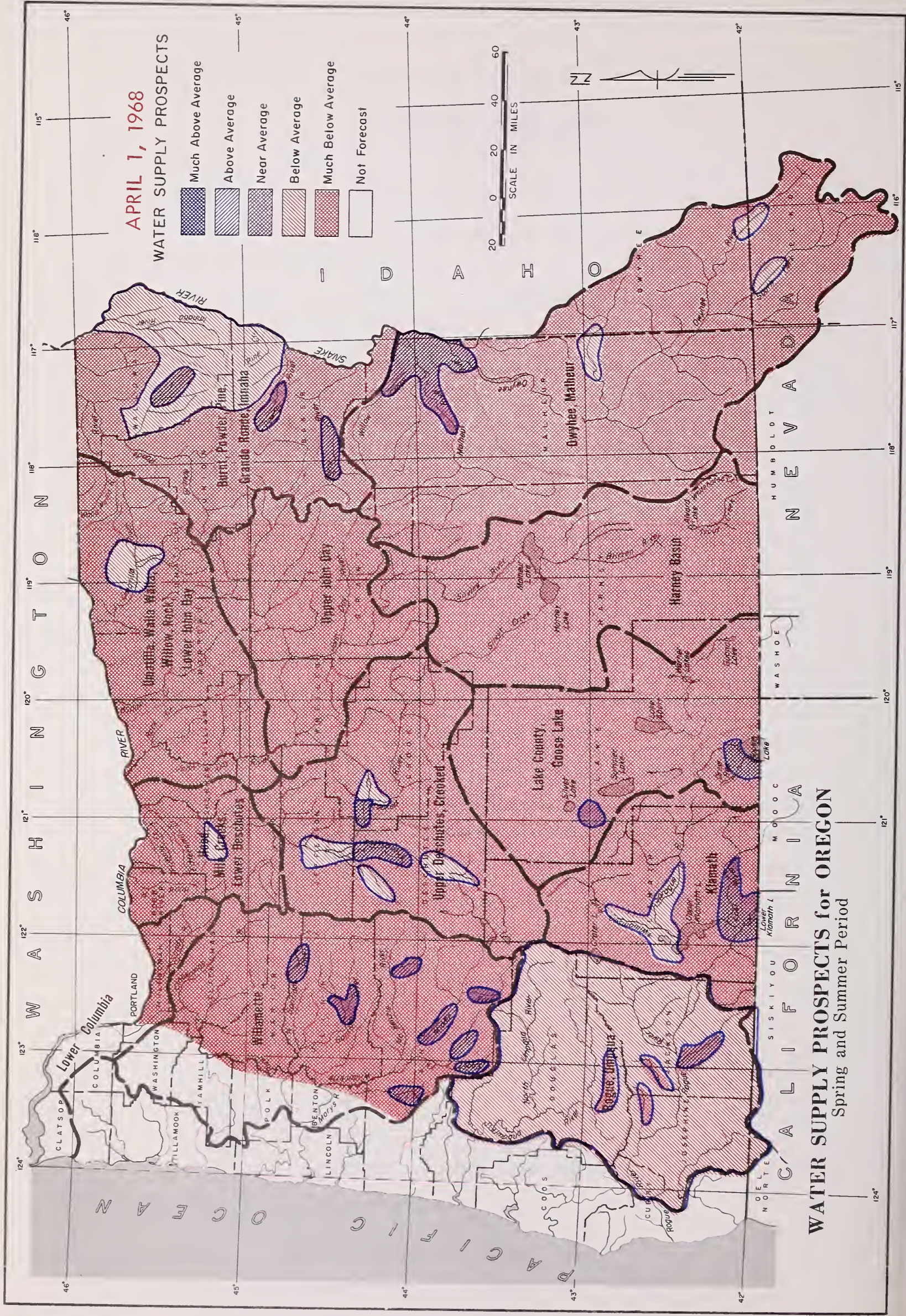
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DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

| | |
|--|-------------------|
| OWYHEE, MALHEUR..... | AREA 1 |
| BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA..... | AREA 2 |
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| UPPER JOHN DAY..... | AREA 4 |
| UPPER DESCHUTES, CROOKED..... | AREA 5 |
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| LOWER COLUMBIA..... | AREA 7 |
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| MAP AND INDEX OF OREGON SNOW COURSES.....(MAP) | |
| LIST OF COOPERATORS..... | INSIDE BACK COVER |





APRIL 1, 1968

WATER SUPPLY PROSPECTS

- Much Above Average
- Above Average
- Near Average
- Below Average
- Much Below Average
- Not Forecast

WATER SUPPLY PROSPECTS for OREGON
Spring and Summer Period

WATER SUPPLY OUTLOOK for OREGON

April 1, 1968

Forecasts of near record-low streamflow for much of Oregon in the summer of 1968 foreshadow a season of extremely short water supplies for most lands except those with stored water available and adequate. Most lands dependent upon diversion from natural streamflow will probably have only one irrigation at best--some lands will have no irrigation. Winter precipitation has been about two-thirds of the average and mountain snowpacks vary from only half of the usual amount to as low as only one-tenth the average. Reservoired water supplies are mostly adequate to carry the lands they serve through a reasonably good season.

PRECIPITATION

Statewide, March precipitation was very short, averaging about 43 percent of the usual. Winter precipitation, November through March, as reported by the U. S. Weather Bureau, averaged 73 to 90 percent west of the Cascades and in northeastern Oregon. Lowest amounts occurred in a north to south band in Central Oregon and were 58 to 63 percent of the average.

SNOW COVER

Water content of the nearly record-low snowpack is half of the usual amount in the extreme northeast and southeast corners of the state. Elsewhere the snow is even poorer with the poorest amounts, reported at only 10 to 20 percent average, in a north to south area including the Walla Walla, Umatilla, John Day, Crooked, Silvies and Owyhee River watersheds.

SOIL MOISTURE

Moisture in the soils under the mountain snowpacks and at lower elevations has increased favorably. Some cultivated soils in eastern and north-central Oregon have been penetrated with moisture only one and a half to two feet and are in need of much more moisture.

RESERVOIR STORAGE

Stored water supplies held in 25 Oregon irrigation reservoirs on April first totals 2,107,400 acre feet or 98 percent of the 15-year average for this date. Inflow to reservoirs was unusually good in February but has been much below average in March.

continued on next page

continued--

Some serious water shortages are probable for most lands served from Antelope reservoir in Malheur County, McKay in Umatilla County, Wickiup and Crane Prairie in Deschutes County, Wasco reservoir in Wasco County, Fish Lake and Fourmile Lake in Jackson County and Ochoco reservoir in Crook County.

There is a strong possibility of water shortages for lands served from Willow Creek reservoir in Malheur County, Cold Springs in Umatilla County and Thompson Valley reservoir in Lake County.

Water supplies forecast for the Warm Springs and Vale Oregon Irrigation Districts in Malheur County are dangerously close to the point of shortages.

STREAMFLOW

Flow of all Oregon streams in the summer of 1968 is expected to be far below the average flows and in many cases will approach the record-low flows of the driest years. Most streams are forecast between lows of 12 and 14 percent up to about 65 percent of the 15-year average (1948-62). A few streams heading in the Wallowa Mountains will flow about 75 and 85 percent average.

Many small Eastern Oregon streams have already completed their flows for the year unless unusually good precipitation is received in the near future.

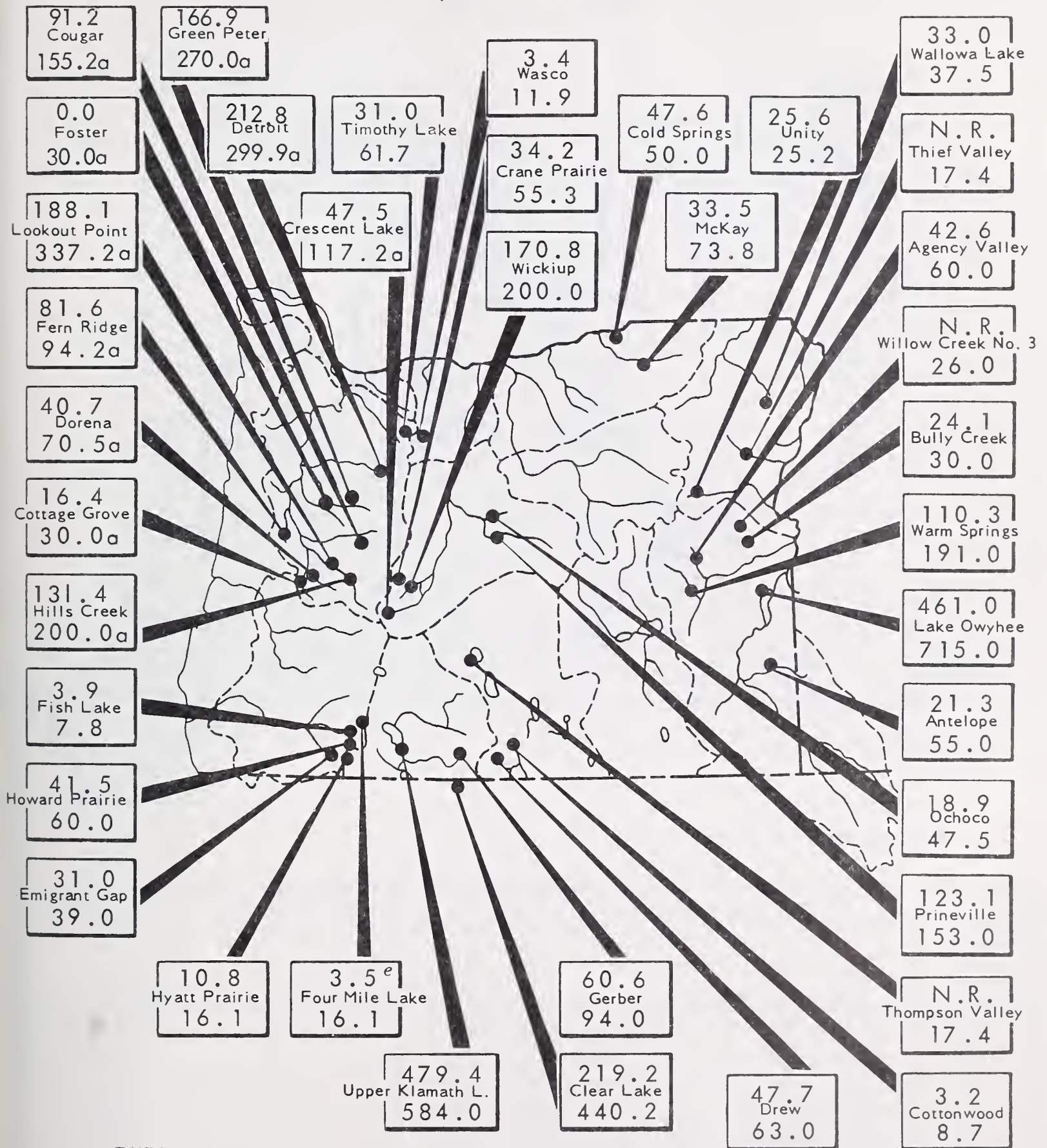
The following representative streamflow forecasts are compared with the 15-year average (1948-62) and are made on the assumption that near average conditions of temperature and precipitation will prevail in the forecast period:

| <u>Stream Station</u> | <u>Period</u> | <u>Acre Feet</u> | <u>Percent Average</u> |
|------------------------------|---------------|------------------|------------------------|
| Inflow to Lake Owyhee | Apr.-Sept. | 70,000 | 18 |
| Malheur R. near Drewsey | Apr.-Sept. | 28,000 | 34 |
| Burnt R. near Hereford | Apr.-Sept. | 15,000 | 36 |
| Powder R. near Baker | Apr.-Sept. | 38,000 | 57 |
| Lostine R. near Lostine | Apr.-Sept. | 115,000 | 88 |
| Grande Ronde R. - La Grande | Apr.-Sept. | 45,000 | 22 |
| South Fork Walla Walla R. | Apr.-Sept. | 35,000 | 46 |
| Umatilla R. at Pendleton | Apr.-Sept. | 67,000 | 37 |
| John Day R. at Prairie City | Apr.-Sept. | 23,000 | 45 |
| Crooked R. near Post | Apr.-Sept. | 30,000 | 24 |
| Deschutes R. at Benham Falls | Apr.-Sept. | 312,000 | 49 |
| Hood R. near Hood River | Apr.-Sept. | 194,000 | 51 |
| Willamette R. at Salem | Apr.-Sept. | 3,800,000 | 68 |
| North Umpqua blw. Lemolo | Apr.-Sept. | 130,000 | 70 |
| Rogue R. at Raygold | Apr.-Sept. | 650,000 | 65 |
| Klamath Lake Inflow | Apr.-Sept. | 375,000 | 59 |
| Chewaucan R. near Paisley | Apr.-Sept. | 48,000 | 54 |
| Drews Reservoir Inflow | Apr.-Sept. | 7,200 | 21 |
| Silvies R. near Burns | Apr.-Sept. | 20,000 | 20 |
| Blitzen R. near Frenchglen | Apr.-Sept. | 18,000 | 29 |

STORAGE STATUS of OREGON RESERVOIRS

usable contents in thousands of acre feet

April 1, 1968



EXPLANATION

| | |
|-------------|-------------|
| 687.0 | ---Contents |
| Lake Owyhee | |
| 715.0 | ---Capacity |

(a) Multiple purpose reservoir - space reserved for flood runoff.

N. R. - No report. (e) estimated

MOUNTAIN SOIL MOISTURE in OREGON as percent of capacity

April 1, 1968



● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

VALLEY PRECIPITATION in OREGON ^a

April 1, 1968



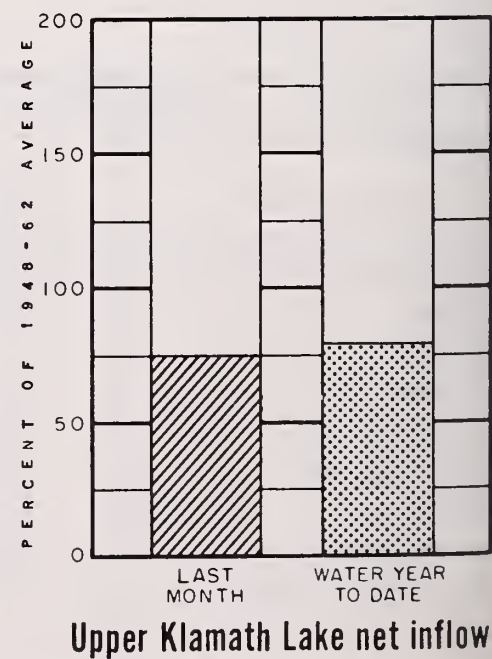
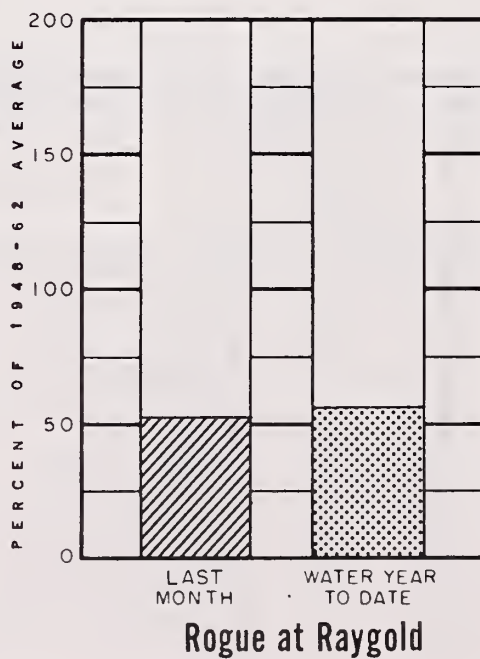
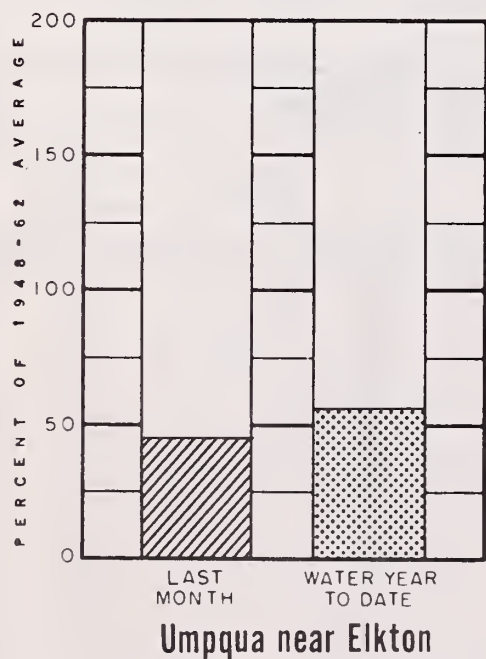
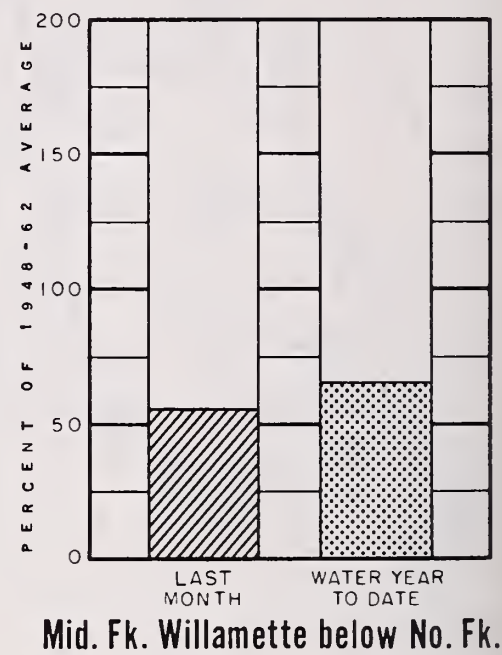
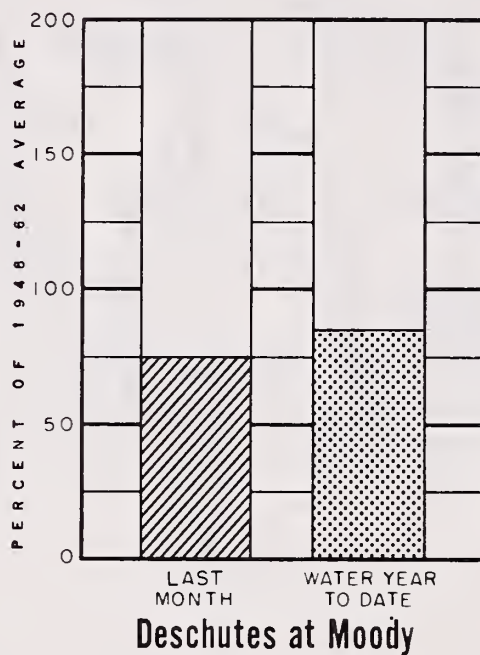
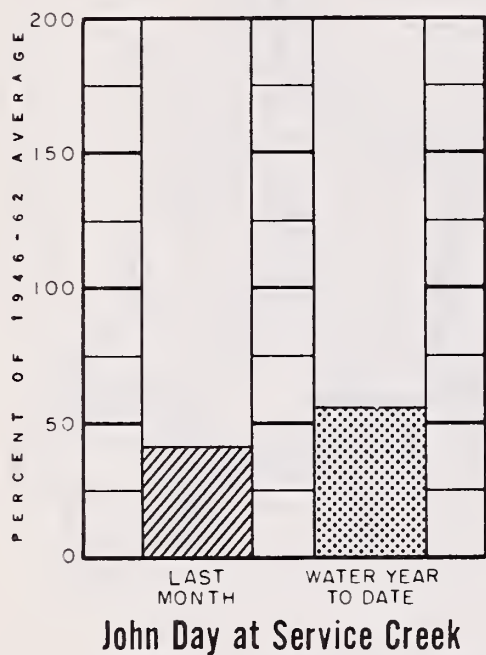
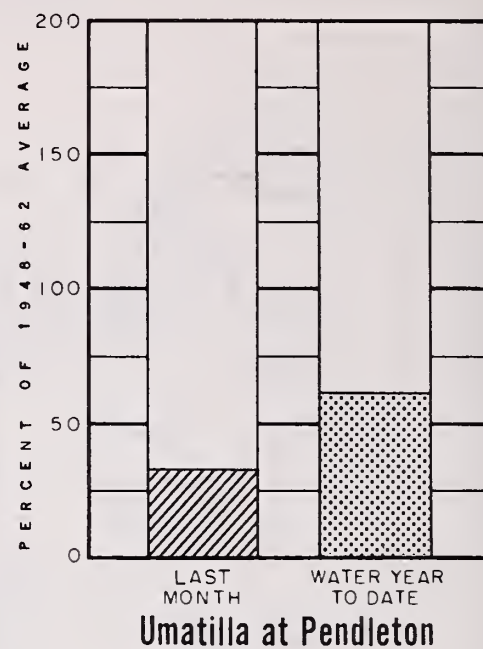
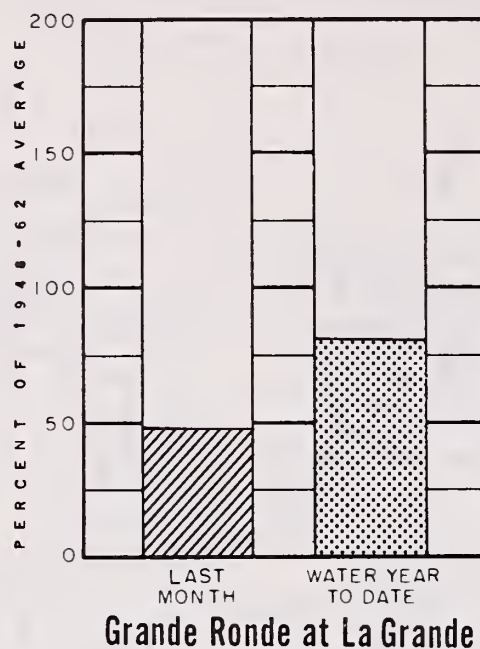
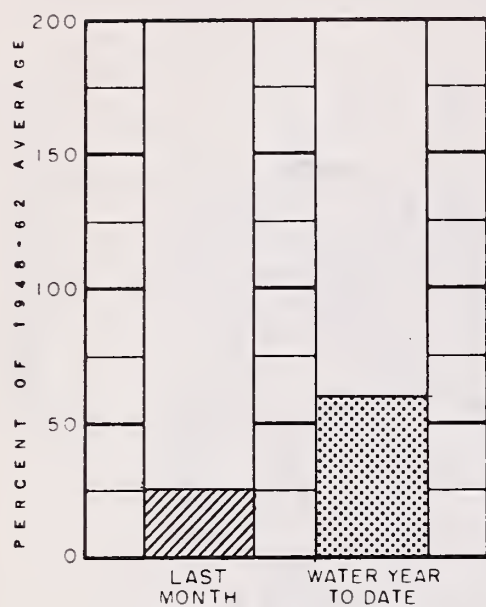
PRECIPITATION as PERCENT of the 1948-62 AVERAGE

| STATION | LAST MONTH | WATER YEAR TO DATE ^b | STATION | LAST MONTH | WATER YEAR TO DATE ^b |
|--------------------|------------|---------------------------------|----------------|------------|---------------------------------|
| BAKER | 35 | 84 | LAKEVIEW | 45 | 88 |
| BEND | 8 | 51 | MEACHAM | 49 | 92 |
| BURNS | 11 | 77 | MEDFORD APT. | 46 | 78 |
| ENTERPRISE | 78 | 89 | NYSSA | 82 | 82 |
| EUGENE APT. | 79 | 87 | PENDLETON APT. | 38 | 57 |
| HEPPNER | 27 | 61 | PORTLAND APT. | 66 | 84 |
| JOHN DAY | 23 | 63 | SALEM APT. | 68 | 90 |
| KLAMATH FALLS APT. | 40 | 50 | THE DALLES | 25 | 62 |
| | | | OWYHEE (NEV.) | 54 | 79 |

(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

April 1, 1968



Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; and North and South Boards of Control Owyhee Project.

WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of

APRIL 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Nearly record-low streamflow is forecast for Malheur County this irrigation season and water users can expect barely sufficient water supplies only where stored water is available and adequate. All other lands will have an extremely short water supply unless substantial and unexpected rain falls at frequent intervals during the summer--a highly unlikely possibility.

SNOW COVER

Water content of the mountain snowpack is nearly record-low and is only 19 per cent of the 15-year April first average (1948-62) on the Owyhee and 35 percent average on the Malheur watersheds.

RESERVOIR STORAGE

Water stored in Lake Owyhee on April first was 461,000 acre feet compared with 422,600 acre feet a year ago. Adding the 50,000 acre feet forecasted to flow into the lake April through July gives a total of 511,000 acre feet for the season which will be sufficient if heavy pumpage from Snake River is provided.

Antelope reservoir held about 21,300 acre feet on April first compared with 25,700 acre feet last year. The reservoir filled in June last year but the Jordan Valley Irrigation District expects this year to pick up not more than 10,000 of the 28,000 acre feet that are forecast to flow in Jordan Creek April through July. With a little rain this will be a very "tight" water supply for the 7,000 acres irrigated by this district.

Total water stored in Warm Springs and Agency Valley is about 153,000 acre feet. Add to this about 42,000 acre feet forecast to flow in the two Malheur streams and the total, less expected losses, is 137,000 acre feet. However, an additional 12,000 acre feet of return flow will probably add just barely enough water to complete a reasonable irrigation season.

STREAMFLOW

The following forecasts of Malheur County streams are compared with the 15-year average (1948-62) and are made on the assumption that near average conditions of temperature and precipitation will prevail in the forecast period:

| <u>Stream Station</u> | <u>Period</u> | <u>Acre Feet</u> | <u>Percent Average</u> |
|-----------------------|---------------|------------------|------------------------|
| Jordan Creek | April-July | 28,000 | 28 |
| Malheur-Drewsey | April-July | 26,000 | 32 |
| Malheur-Beulah | April-July | 16,000 | 27 |
| Lake Owyhee Inflow | April-July | 50,000 | 14 |

All other streams have already completed their flow or will cease to flow very shortly.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

| STREAM or AREA | FLOW PERIOD | |
|----------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Boulder Creek | Poor | Poor |
| Bully Creek | Poor | Poor |
| Cow Creek | Poor | Poor |
| Jordan Creek | Poor | Poor |
| Jordan Valley Irrig. Dist. | Fair | Fair |
| McDermitt Creek | Poor | Poor |
| Oregon Canyon Creek | Poor | Poor |
| Owyhee Project | Average | Average |
| Succor Creek | Poor | Poor |
| Tenmile Creek | Poor | Poor |
| Vale-Oregon Irrig. Dist. | Average | Average |
| Warm Springs Irrig. Dist. | Average | Average |
| Willow Creek (Reservoired) | Average | Fair |

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|-----------------|-----------------|---------------------------|-----------|-----------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| Agency Valley | 60.0 | 42.6 | 38.6 | 41.4 |
| Antelope | 55.0 | 21.3 | 25.7 | 19.6 |
| Bully Creek | 30.0 | 24.1 | 21.7 | - - |
| Lake Owyhee | 715.0 | 461.0 | 422.6 | 483.4 |
| Warm Springs | 191.0 | 110.3 | 95.2 | 99.1 |
| Willow Creek #3 | 26.0 | b | - - | - - |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT. OF AVERAGE ⁱ |
|----------------|------------------------------------|--------------------|-----------------|-----------------|---|
| NO. | NAME | | | | |
| 1780 | Jordan Creek above Lone Tree Creek | 28 | April-July | 98 | 28 |
| 2140 | Malheur near Drewsey | 26 | April-July | 80 | 32 |
| | | 28 | April-Sept. | 82 | 34 |
| 2175 | Malheur, North Fork at Beulah | 16 | April-July | 59 | 27 |
| | | 19 | April-Sept. | 65 | 29 |
| 1825 | Owyhee Reservoir net Inflow | 50 | April-July | 365 | 14 |
| | | 70 | April-Sept. | 383 | 18 |

SOIL MOISTURE

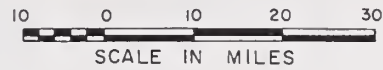
| STATION | | PROFILE (Inches) | | SOIL MOISTURE (Inches) | | | |
|------------------------|-----------|------------------|----------|------------------------|-----------|-----------|-------------------|
| | | DEPTH | CAPACITY | DATE | THIS YEAR | LAST YEAR | 2 YEARS AGO |
| NAME | ELEVATION | | | | | | |
| Bear Creek (Nev.) | 7800 | 72 | 16.8 | 3/28 | 10.8 | 10.1 | 12.1 |
| Big Bend (Nev.) | 6700 | 48 | 16.7 | 3/25 | 15.8 | 15.6 | 15.4 |
| Blue Mtn. Springs | 5900 | 42 | 16.9 | 3/28 | 12.6 | 11.8 | 8.8 |
| Crane Prairie | 5375 | 48 | 18.2 | 3/28 | 16.0 | 16.4 | 15.2 |
| Folly Farm | 4450 | 30 | 12.5 | c | | | |
| Jack Cr., Lower (Nev.) | 6800 | 48 | 8.6 | 3/26 | 8.3 | 8.3 | - - |
| Jordan Valley | 4390 | 48 | 19.3 | 3/28 | 15.2 | - - | 14.6 ^f |
| Mud Flat (Ida.) | 5500 | 48 | 12.8 | 3/27 | 14.4 | 14.4 | 14.4 |
| Rodeo Flat (Nev.) | 6800 | 42 | 11.0 | 3/25 | 10.9 | 10.6 | 10.6 |
| Stinking Water Summit | 4800 | 48 | 21.9 | b | | | |
| Taylor Canyon (Nev.) | 6200 | 48 | 15.1 | 3/26 | 14.7 | 14.7 | 12.4 ^f |
| Triangle (Ida.) | 5150 | 48 | 16.6 | c | | | |

SNOW

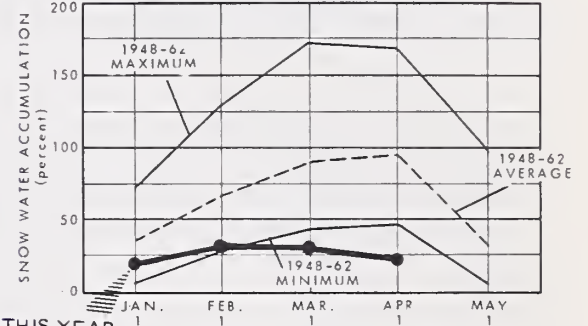
| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|----------------------------------|-----------|---------------------|---------------------|------------------------|------------------------|-------------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Antelope Ridge (Ida.) | 5900 | 3/27 | 0 | 0.0 | 4.9 | - - |
| Barney Creek | 5950 | 3/28 | 11 | 4.2 | 8.8 | 8.7 |
| Battle Creek ^e (Ida.) | 5700 | 3/29 | 0 | 0.0 | T | - - |
| Bear Creek (Nev.) | 7800 | 3/28 | 46 | 16.6 | 20.1 | 21.0 |
| Big Bend (Nev.) | 6700 | 3/25 | T | T | 6.1 | 10.7 |
| Blue Mountain Springs | 5900 | 3/28 | 23 | 8.8 | 16.4 | 17.3 |
| Buck Pasture ^e | 5700 | 3/29 | 0 | 0.0 | 0.0 | - - |
| Buckskin, Lower (Nev.) | 6700 | 3/27 | 3 | 1.1 | 5.9 | 9.2 ^h |
| Buckskin, Upper (Nev.) | 7200 | 3/27 | 12 | 4.0 | 8.1 | 10.3 ^h |
| Bull Basin ^e (Ida.) | 5600 | 3/29 | 0 | 0.0 | 0.0 | - - |
| Bully Creek ^e | 5300 | 3/29 | 0 | 0.0 | T | - - |
| Call Meadow ^e | 5340 | 3/29 | 0 | 0.0 | 1.4 | - - |

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS



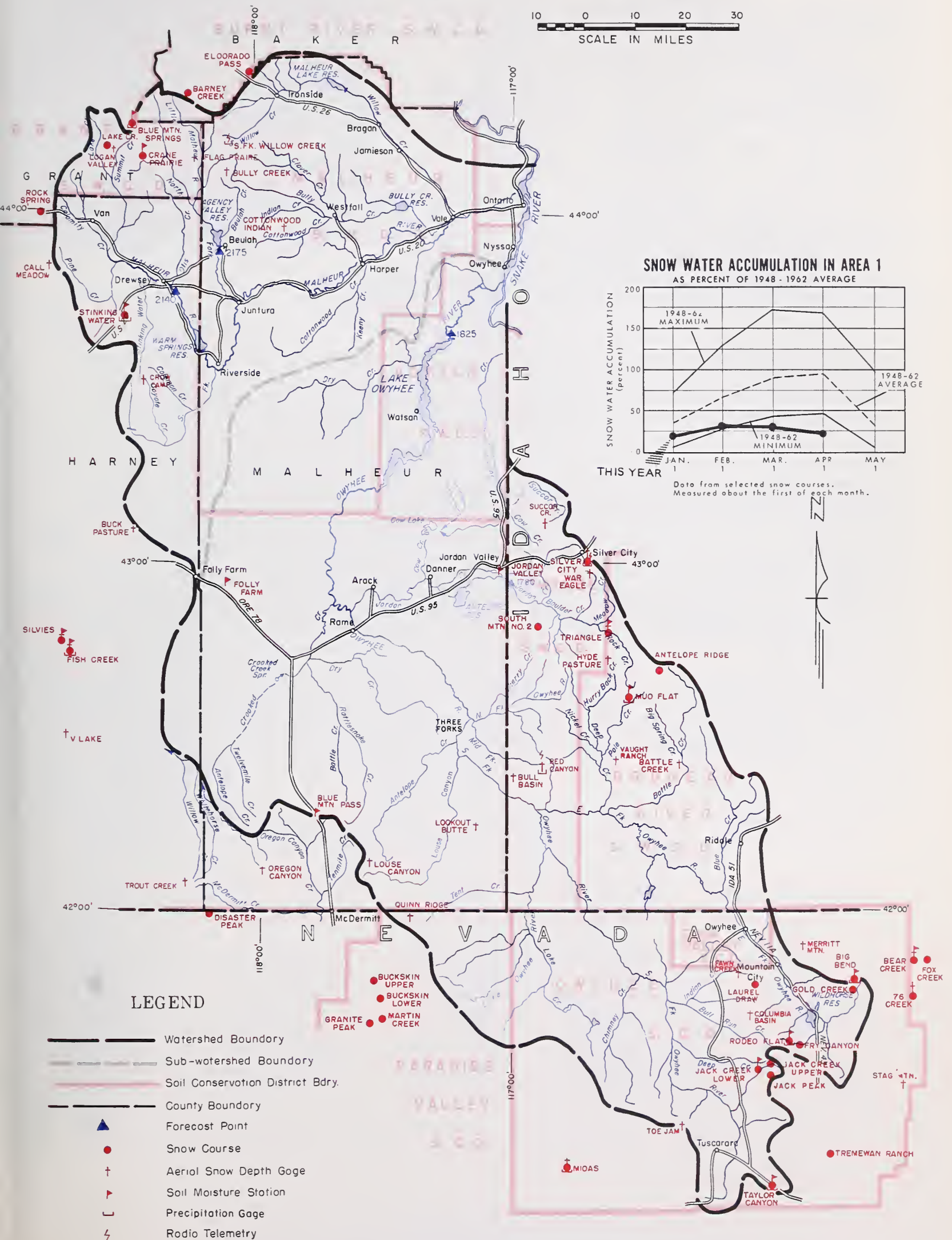
SNOW WATER ACCUMULATION IN AREA 1
AS PERCENT OF 1948-1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ▶ Soil Moisture Station
- ⌊ Precipitation Gage
- ⚡ Radio Telemetry



Owyhee, Malheur Watersheds

SNOW

| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|--------------------------------------|-----------|---------------------|---------------------|------------------------|------------------------|-------------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Columbia Basin ^e (Nev.) | 6650 | b ⁱ | | | | |
| Cottonwood-Indian ^e | 4320 | 3/29 | 0 | 0.0 | T | - - |
| Crane Prairie | 5375 | 3/28 | 8 | 2.9 | 9.6 | 10.9 |
| Crow Camp ^e | 5500 | 3/29 | 0 | 0.0 | T | - - |
| Disaster Peak (Nev.) | 6500 | 3/25 | 4 | 1.2 | 10.6 | 11.7 ^h |
| Eldorado Pass | 4600 | 3/29 | 0 | 0.0 | 0.0 | 0.6 ^h |
| Fawn Creek ^e (Nev.) | 7000 | b ⁱ | | | | |
| Fish Creek | 7900 | 3/29 | 42 | 15.2 | 26.6 | 26.9 |
| Flag Prairie ^e | 4750 | 3/29 | 0 | 0.0 | T | - - |
| Fox Creek (Nev.) | 6800 | 3/28 | 12 | 5.4 | - - | 10.9 |
| Fry Canyon (Nev.) | 6700 | 3/25 | 0 | 0.0 | 5.9 | 8.9 |
| Gold Creek (Nev.) | 6600 | 3/25 | 0 | 0.0 | 2.2 | 6.5 |
| Granite Peak (Nev.) | 7800 | 3/27 | 34 | 11.8 | 15.6 | 12.5 ^h |
| Hyde Pasture ^e (Ida.) | 5800 | 3/29 | 0 | 0.0 | T | - - |
| Jack Creek, Lower (Nev.) | 6800 | 3/26 | T | T | 0.7 | 3.5 |
| Jack Creek, Upper (Nev.) | 7250 | 3/26 | 13 | 4.3 | 8.2 | 11.6 |
| Jack Peak (Nev.) | 8420 | 3/26 | 60 | 19.4 | 25.6 | 27.5 ^h |
| Lake Creek | 5120 | 3/28 | 7 | 2.2 | 10.1 | 11.2 |
| Laurel Draw (Nev.) | 6700 | b | | | | |
| Logan Valley ^e | 5100 | 3/29 | 0 | 0.0 | 2.2 | - - |
| Lookout Butte ^e | 5650 | 3/29 | 0 | 0.0 | 0.0 | - - |
| Louse Canyon ^e | 6440 | 3/29 | 0 | 0.0 | 1.4 | - - |
| Martin Creek (Nev.) | 6700 | 3/27 | 13 | 4.8 | 12.3 | 8.8 ^h |
| Merritt Mountain ^e (Nev.) | 7000 | b | | | | |
| Midas (Nev.) | 7200 | 3/25 | T | T | 1.1 | 1.9 ^h |
| Mud Flat (Ida.) | 5500 | 3/27 | 0 | 0.0 | 3.1 | 4.5 ^h |
| Oregon Canyon ^e | 6950 | 3/29 | 0 | 0.0 | 7.0 | - - |
| Quinn Ridge (Nev.) | 6300 | 3/29 | 0 | 0.0 | 0.0 | - - |
| Red Canyon ^e (Ida.) | 6500 | 3/29 | 0 | 0.0 | 2.5 | - - |
| Rock Spring | 5100 | 3/29 | T | T | 5.0 | 5.2 |
| Rodeo Flat (Nev.) | 6800 | 3/25 | 0 | 0.0 | 4.1 | 8.2 |
| 76 Creek (Nev.) | 7100 | b | | | | |
| Silver City (Ida.) | 6400 | 3/28 | 16 | 7.0 | 14.6 | 16.3 ^h |
| Silvies | 6900 | 3/29 | 5 | 2.5 | 16.4 | 14.0 |
| South Mountain #2 (Ida.) | 6340 | 3/28 | 12 | 4.4 | 10.5 | 13.0 ^h |
| Stag Mountain ^e (Nev.) | 7800 | b ⁱ | | | | |
| Stinking Water | 4800 | 4/1 | 0 | 0.0 | T | 0.9 ^h |
| Succor Creek ^e (Ida.) | 6100 | 3/29 | 0 | 0.0 | 6.1 | - - |
| Taylor Canyon (Nev.) | 6200 | 3/26 | 0 | 0.0 | 3.4 | 3.7 |
| Toe Jam (Nev.) | 7700 | b | | | | |
| Tremewan Ranch (Nev.) | 5700 | 3/25 | 0 | 0.0 | 0.0 | 0.7 |
| Triangle ^e (Ida.) | 5150 | 3/29 | 0 | 0.0 | 0.0 | - - |
| Trout Creek ^e | 7800 | 3/29 | 6 | 2.4 | 12.6 | - - |
| "V" Lake ^e | 6600 | 3/29 | 0 | 0.0 | 3.2 | - - |
| Vaught Ranch ^e (Ida.) | 5950 | 3/29 | 0 | 0.0 | 0.0 | - - |
| War Eagle ^e (Ida.) | 7700 | 3/29 | 15 | 6.6 | 27.4 | - - |

WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of
APRIL 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

1968 summer water supplies for farmers, ranchers and other water users will be seriously short with extreme shortages expected for lands served directly from the Grande Ronde River. All lands served from reservoirs will have sufficient water this season. Wallowa County streams will provide near average water supplies.

SNOW COVER

Water content of the mountain snowpack is only half (51 percent) of the 15-year April first average (1948-62) on watersheds of Wallowa, Union and Baker Counties.

PRECIPITATION and SOIL MOISTURE

Winter precipitation, November through March, has been 79 percent of the average according to the U.S. Weather Bureau. Mountain soil moisture has increased to 73 percent of capacity at four stations that averaged 66 percent of capacity last month. Moisture has penetrated about 20 inches in most valley soils.

RESERVOIR STORAGE

Storage in Wallowa Lake increased to 33,000 acre feet on April first compared with 12,300 a.f. a year ago. Unity reservoir is full with 25,600 acre feet held in comparison with 17,900 a.f. last year. Thief Valley reservoir is said to be full and a small amount of water has been stored by Mason Dam.

STREAMFLOW

The following forecasts of streamflow are compared with the 15-year average (1948-62) and are made on the assumption that near average conditions of temperature and precipitation will prevail in the forecast period:

| <u>Stream Station</u> | <u>Period</u> | <u>Acre Feet</u> | <u>Percent Average</u> |
|---------------------------|---------------|------------------|------------------------|
| Burnt R. near Hereford | Apr.-Sept. | 15,000 | 36 |
| Powder R. near Baker | Apr.-Sept. | 38,000 | 57 |
| Eagle Cr. abv. Skull Cr. | Apr.-Sept. | 140,000 | 77 |
| Grande Ronde - La Grande | Apr.-Sept. | 45,000 | 22 |
| Catherine Cr. near Union | Apr.-Sept. | 48,000 | 66 |
| Bear Cr. near Wallowa | Apr.-Sept. | 54,000 | 75 |
| Lostine R. near Lostine | Apr.-Sept. | 115,000 | 88 |
| Hurricane Cr. near Joseph | Apr.-Sept. | 41,000 | 85 |
| East Fk. Wallowa - Joseph | Apr.-Sept. | 10,000 | 83 |
| Imnaha R. at Imnaha | Apr.-Sept. | 270,000 | 85 |

Many smaller streams will have extremely poor flow this season.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

| STREAM or AREA | FLOW PERIOD | |
|----------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Alder Slope (Hurricane) | Average | Fair |
| Baker Valley | Fair | Poor |
| Big Creek | Fair | Poor |
| Clover Cr. (nr. N. Powder) | Poor | Poor |
| Cove | Poor | Poor |
| Durkee | Poor | Poor |
| Eagle Valley | Fair | Fair |
| Elgin | Poor | Poor |
| Enterprise-Joseph | Average | Average |
| Hereford-Bridgeport | Average | Average |
| Imnaha River | Average | Fair |
| La Grande-Island City | Poor | Poor |
| Lostine-Wallowa | Average | Fair |
| No. Powder River-Wolf Cr. | Poor | Poor |
| Pine Valley | Fair | Fair |
| Powder River-Elk Creek | Fair | Poor |
| Summerville | Poor | Poor |
| Sumpter Valley | Poor | Poor |
| Union-Hot Lake | Poor | Poor |
| Unity | Poor | Poor |

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|--------------|-----------------|---------------------------|-----------|-----------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| Thief Valley | 17.4 | b | -- | -- |
| Unity | 25.2 | 25.6 | 17.9 | 14.1 |
| Wallowa Lake | 37.5 | 33.0 | 12.3 | 18.2 |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT. OF AVERAGE ⁱ |
|----------------|---|--------------------|-----------------|-----------------|---|
| NO. | NAME | | | | |
| 3305 | Bear near Wallowa | 54 | April-Sept. | 72 | 75 |
| 2730 | Burnt near Hereford ^d | 13 | April-June | 39 | 33 |
| | | 15 | April-Sept. | 41 | 36 |
| 3200 | Catherine near Union | 48 | April-Sept. | 73 | 66 |
| 2882 | Eagle Creek above Skull Creek | 127 | April-July | 166 | 76 |
| | | 140 | April-Sept. | 181 | 77 |
| 3190 | Grande Ronde at La Grande | 44 | April-July | 202 | 22 |
| | | 45 | April-Sept. | 203 | 22 |
| 3295 | Hurricane near Joseph | 41 | April-Sept. | 48 | 85 |
| 2920 | Imnaha at Imnaha | 270 | April-Sept. | 318 | 85 |
| 3300 | Lostine near Lostine | 115 | April-Sept. | 131 | 88 |
| 2755 | Powder near Baker | 35 | April-July | 66 | 53 |
| | | 38 | April-Sept. | 67 | 57 |
| 3250 | Wallowa, East Fork near Joseph ^d | 7.7 | April-July | 9.7 | 79 |
| | | 10.0 | April-Sept. | 12.0 | 83 |

SOIL MOISTURE

| STATION | | PROFILE (Inches) | | SOIL MOISTURE (Inches) | | | |
|-----------------------|-----------|------------------|----------|------------------------|-----------|-----------|-------------|
| | | DEPTH | CAPACITY | DATE | THIS YEAR | LAST YEAR | 2 YEARS AGO |
| NAME | ELEVATION | | | | | | |
| Blue Mtn. Summit | 5100 | 36 | 16.8 | 3/27 | 11.7 | 12.3 | 9.9 |
| Dooley Mountain | 5430 | 36 | 9.2 | 3/22 | 6.6 | 4.0 | 3.9 |
| Emigrant Springs | 3925 | 48 | 22.3 | 3/28 | 20.4 | 20.1 | 18.3 |
| Ladd Summit | 3730 | 48 | 18.9 | 3/22 | 10.5 | 14.2 | 10.3 |
| Moss Springs | 5850 | 42 | 25.8 | 3/29 | 14.3* | 14.6 | 16.4 |
| Tollgate | 5070 | 48 | 23.6 | 3/28 | 18.6* | 18.8 | 18.3 |
| *Accuracy questioned. | | | | | | | |

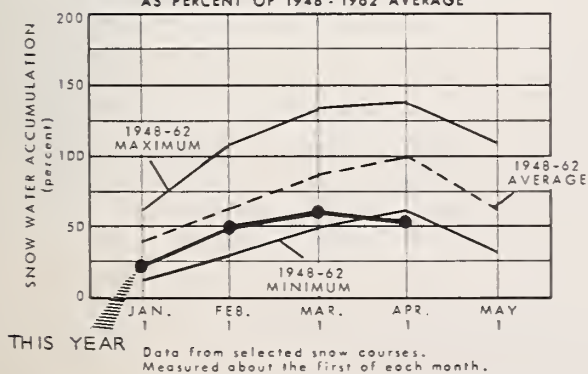
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 2
AS PERCENT OF 1948-1962 AVERAGE

LEGEND



- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Boundary
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aerial Snow Depth Gauge
- Precipitation Gauge

Burnt, Powder, Pine, Grande Ronde, Imnaha Watersheds

SNOW

| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|-----------------------------------|-----------|---------------------|---------------------|------------------------|------------------------|-------------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Aneroid Lake #1 | 7480 | 3/24 | 90 | 34.4 | 45.2 | 38.9 ^h |
| Aneroid Lake #2 | 7300 | 3/25 | 79 | 29.0 | 37.4 | 34.6 |
| Anthony Lake | 7125 | 3/28 | 55 | 19.5 | 29.8 | 28.9 |
| Bald Mountain ^e (Ore.) | 6700 | 3/29 | 27 | 9.7 | 22.7 | - - |
| Barney Creek | 5950 | 3/28 | 11 | 4.2 | 8.8 | 8.7 |
| Beaver Reservoir | 5340 | 3/26 | 15 | 5.9 | 10.2 | 12.8 |
| Big Sheep ^e | 6200 | 3/29 | 64 | 24.0 | 32.3 | - - |
| Blue Mountain Summit | 5098 | 3/27 | 8 | 3.0 | 7.4 | 8.6 |
| Bourne | 5800 | 3/25 | 17 | 6.6 | 12.2 | 16.3 |
| County Line | 4800 | 3/29 | 0 | 0.0 | 4.3 | 7.6 |
| Dooley Mountain | 5430 | 3/22 | 12 | 4.2 | 8.3 | 9.3 |
| Eilertson Meadows | 5400 | 3/26 | 19 | 7.3 | 11.9 | 12.2 |
| Eldorado Pass | 4600 | 3/29 | 0 | 0.0 | 0.0 | 0.6 ^h |
| Gold Center | 5340 | 3/25 | 16 | 6.5 | 11.1 | 13.7 |
| Goodrich Lake | 6775 | 3/29 | 86 | 35.9 | 38.1 | 38.8 ^h |
| Intake House | 4930 | 3/26 | 24 | 7.7 | 10.0 | - - |
| Little Alps | 6200 | 3/28 | 24 | 7.9 | 15.4 | - - |
| Little Antone | 5000 | 3/28 | 0 | 0.0 | 6.3 | - - |
| Lucky Strike | 5050 | 3/27 | 11 | 4.0 | 12.3 | 14.6 ^h |
| Meacham | 4300 | 3/28 | 0 | 0.0 | 7.7 | 9.5 |
| Mirror Lake ^e | 8200 | 3/29 | 173 | 79.0 | 72.0 | - - |
| Moss Springs | 5850 | 3/29 | 41 | 14.8 | 25.8 | 26.2 |
| Power Plant | 3990 | 3/26 | 0 | 0.0 | 2.8 | - - |
| Schneider Meadows | 5400 | 3/27 | 62 | 25.3 | 29.6 | 32.4 |
| Schoolmarm | 4775 | 3/29 | 1 | 0.1 | 3.8 | 5.2 ^h |
| Standley ^e | 7400 | 3/29 | 74 | 26.0 | 37.0 | - - |
| Taylor Green | 5740 | 3/29 | 27 | 10.6 | 17.4 | 18.8 |
| Tipton | 5100 | 3/27 | 6 | 2.6 | 9.1 | 11.0 ^h |
| Tollgate | 5070 | 3/28 | 11 | 3.3 | 24.2 | 29.9 |
| TV Ridge | 7000 | 3/29 | 50 | 18.0 | 26.0 | - - |

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

as of

APRIL 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Nearly record-low streamflow is forecast for Umatilla, Morrow and Gilliam counties this irrigation season and water users can expect extremely deficient water supplies except for lands served from the Cold Springs and McKay reservoirs which will have fair water supplies early in the season but very poor supplies in late season. All other lands will have severe water shortages.

SNOW COVER

Water content of the mountain snowpack has decreased to only 10 percent of the April first average and is missing completely at 6 out of the 9 snow courses measured. Snowpacks are only slightly better than in the record-low year of 1934.

PRECIPITATION and SOIL MOISTURE

Winter precipitation, November through March, has been 76 percent of the average according to the U.S. Weather Bureau. Mountain soil moisture is about 84 percent of the capacity. Moisture has penetrated valley soils only from 18 to 28 inches this season.

RESERVOIR STORAGE

Cold Springs reservoir was nearly full with 47,600 acre feet on hand on April first. Additional diversions from the Umatilla River are likely to be greatly limited and it is doubtful that the Hermiston District will get much more from this source.

McKay reservoir held only 33,500 acre feet on April first and withdrawals had begun for the Westland District. The Westland and Stanfield Districts will likely experience serious water shortages in the later part of the season.

STREAMFLOW

Flow of the North and South Forks of Walla Walla River is forecast at 6,000 acre feet (32 percent average) and 30,000 acre feet (48 percent) respectively for the April-July period--far short of the usual water available.

The following forecasts are compared with the 15-year average (1948-62) and are made on the assumption that near average conditions of temperature and precipitation will prevail in the forecast period:

| <u>Stream Station</u> | <u>Period</u> | <u>Acre Feet</u> | <u>Percent Average</u> |
|------------------------|---------------|------------------|------------------------|
| Butter Creek | April-July | 2,000 | 20 |
| McKay Creek | April-Sept. | 9,600 | 30 |
| Umatilla at Pendleton | April-July | 61,000 | 34 |
| Walla Walla - No. Fork | April-July | 6,000 | 32 |
| Walla Walla - So. Fork | April-July | 30,000 | 48 |

All other streams have already completed their flow or will cease to flow very shortly.

Report prepared by
W. T. FROST and TOM GEORGE
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| STREAM or AREA | FLOW PERIOD | |
|--------------------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Walla Walla River, No. Fk. | Poor | Poor |
| Walla Walla River, So. Fk. | Poor | Poor |
| Walla Walla River, Main | Poor | Poor |
| Walla Walla River, Little | Poor | Poor |
| Couse Creek | Poor | Poor |
| Dry Creek | Poor | Poor |
| Pine Creek | Poor | Poor |
| Umatilla River, Main | Poor | Poor |
| Wildhorse Creek | Poor | Poor |
| Umatilla R. (Cold Springs Reservoir) | Fair | Poor |
| Umatilla R. (McKay Res.) | Fair | Poor |
| McKay Creek | Poor | Poor |
| Birch Creek | Poor | Poor |
| Butter Creek | Poor | Poor |
| Willow Creek | Poor | Poor |
| Rhea Creek | Poor | Poor |
| Rock Cr. (John Day tributary) | Poor | Poor |

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|--------------|-----------------|---------------------------|-----------|-----------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| Cold Springs | 50.0 | 47.6 | 50.0 | 48.1 |
| McKay | 73.8 | 33.5 | 38.8 | 54.0 |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT OF AVERAGE ⁱ |
|----------------|-------------------------------------|--------------------|-----------------|-----------------|--|
| NO. | NAME | | | | |
| 0320 | Butter Creek near Pine City | 2.0 | April-July | 9.8 | 20 |
| 0225 | McKay near Pilot Rock | 9.6 | April-Sept. | 32 | 30 |
| 0200 | Umatilla near Gibbon | 25 | April-July | 88 | 28 |
| | | 30 | April-Sept. | 93 | 32 |
| 0210 | Umatilla at Pendleton | 61 | April-July | 178 | 34 |
| | | 67 | April-Sept. | 183 | 37 |
| 0110 | Walla Walla, North Fork near Milton | 6.0 | April-July | 18.9 | 32 |
| | | 6.3 | April-Sept. | 19.6 | 32 |
| 0100 | Walla Walla, South Fork near Milton | 30 | April-July | 62 | 48 |
| | | 35 | April-Sept. | 76 | 46 |

SOIL MOISTURE

| SOIL MOISTURE | | PROFILE (Inches) | | SOIL MOISTURE (Inches) | | | |
|-----------------------|-----------|------------------|----------|------------------------|-----------|-----------|-------------|
| STATION | | DEPTH | CAPACITY | DATE | THIS YEAR | LAST YEAR | 2 YEARS AGO |
| NAME | ELEVATION | | | | | | |
| Athena-Weston | 1700 | 48 | 18.7 | 3/28 | 11.2 | 11.4 | 14.2 |
| Battle Mtn. Summit | 4340 | 48 | 13.8 | 3/28 | 12.9 | 13.8 | 12.9 |
| Emigrant Springs | 3925 | 48 | 22.3 | 3/28 | 20.4 | 20.1 | 18.3 |
| Tollgate | 5070 | 48 | 23.6 | 3/28 | 18.6* | 18.8 | 18.3 |
| *Accuracy questioned. | | | | | | | |

*Accuracy questioned.

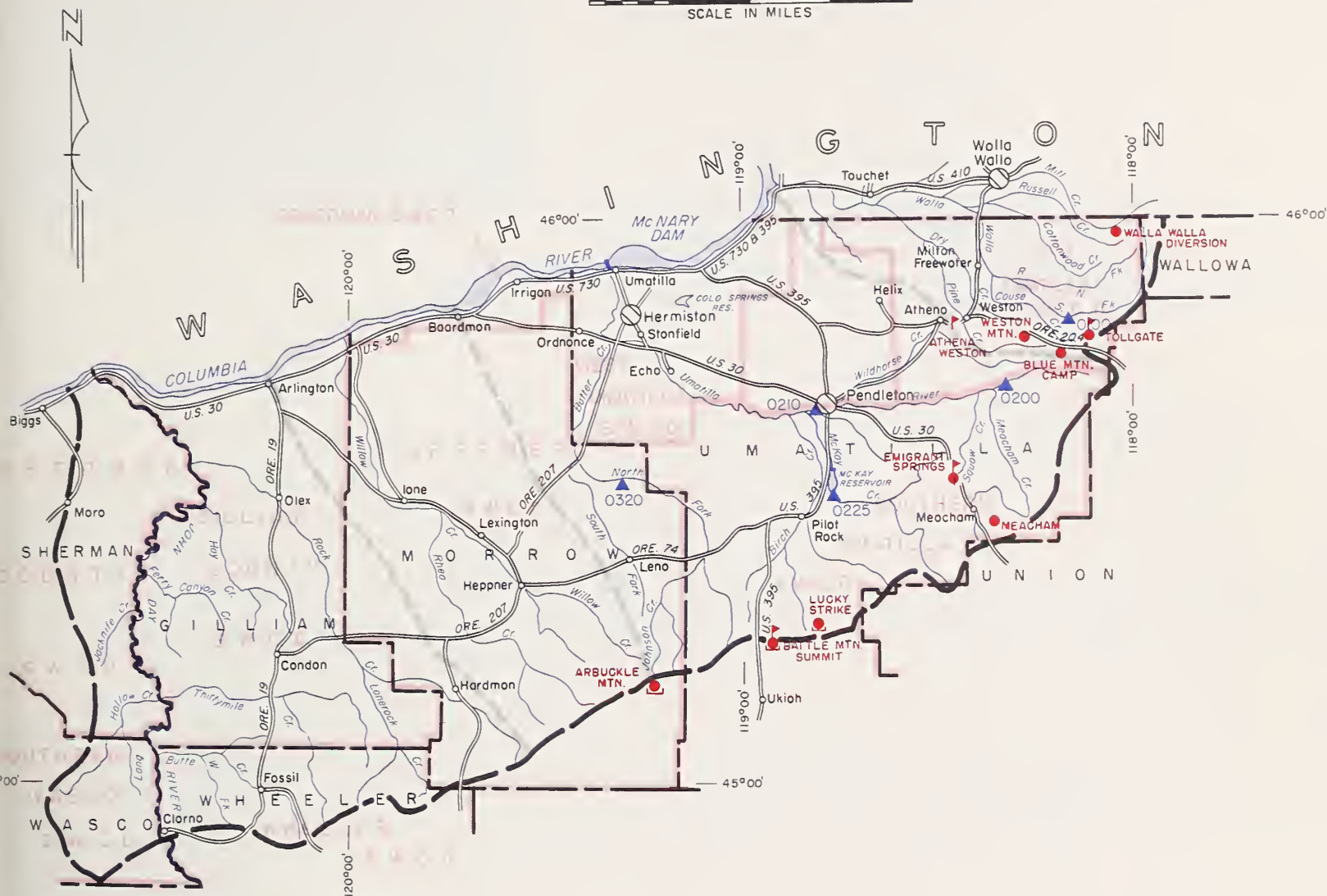
SNOW

| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|------------------------|-----------|---------------------|---------------------|------------------------|------------------------|-------------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Arbuckle Mountain | 5400 | 3/29 | 0 | 0.0 | 8.1 | 12.7 |
| Battle Mountain Summit | 4340 | 3/28 | 0 | 0.0 | 0.6 | 2.2 ^m |
| Blue Mountain Camp | 4300 | 3/28 | 3 | 0.8 | 9.5 | - - |
| Emigrant Springs | 3925 | 3/28 | 0 | 0.0 | 0.4 | 5.1 |
| Lucky Strike | 5050 | 3/27 | 11 | 4.0 | 12.3 | 14.6 ^h |
| Meacham | 4300 | 3/28 | 0 | 0.0 | 7.7 | 9.5 |
| Tollgate | 5070 | 3/28 | 11 | 3.3 | 24.2 | 29.9 |
| Walla Walla Diversion | 2400 | Not Surveyed | | | 0.0 | 0.0 ^h |
| Weston Mountain | 2700 | 3/28 | 0 | 0.0 | 0.6 | - - |

^a based on normal snow depth gage, water content estimated. ^(j) nearest current data. ^(g) Partly estimated. ^(h) 1948-62 adjusted average. ⁽ⁱ⁾ 1948-62 15 year average. ^(j) Telephonic report - data not confirmed. ^(k) Data from PP&L Co. or USBR records. ^(m) Average for 5 or more years in base period.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

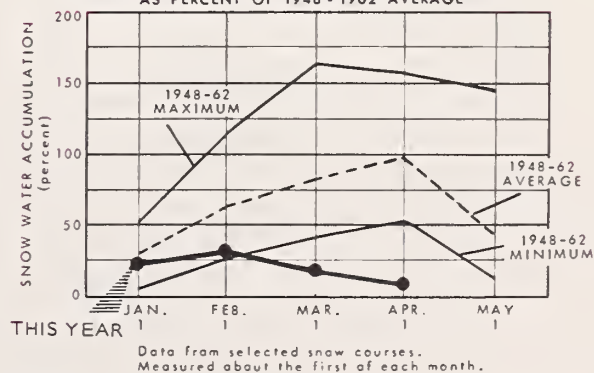
10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▶ Soil Moisture Station
- ⌈ Precipitation Gage

SNOW WATER ACCUMULATION IN AREA 3 AS PERCENT OF 1948-1962 AVERAGE





WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS

OREGON

as of

APRIL 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Nearly record-low streamflow is forecast for John Day Basin in the 1968 irrigation season and local water users can expect extreme shortages in the middle and late weeks of the summer.

SNOW COVER

Water content of the mountain snowpack in Grant and Wheeler counties continued to decrease and is now only 18 percent of the 15-year April first average (1948-62). The snow situation has been worse only in 1934 and 1963.

PRECIPITATION and SOIL MOISTURE

Winter precipitation, November through March, has been only 60 percent of the average according to the U.S. Weather Bureau. March was only 26 percent average. Upper watershed soils are now wet to 80 percent of capacity. Valley soils are wet down to only one and one-half or two feet in depth.

STREAMFLOW

The following forecasts of streamflow in John Day Basin are compared with the 15-year April first average (1948-62) and are made with the assumption that near average conditions of temperature and precipitation will prevail for the period of the forecast:

| <u>Stream Station</u> | <u>Period</u> | <u>Acre Feet</u> | <u>Percent Average</u> |
|-------------------------|---------------|------------------|------------------------|
| John Day - Prairie City | April-July | 20,000 | 44 |
| John Day - Ritter | April-July | 57,000 | 45 |
| Strawberry Creek | April-July | 5,600 | 69 |

All other streams have already completed their flow or will cease to flow very shortly.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| STREAM or AREA | FLOW PERIOD | |
|---------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Beech Creek | Poor | Poor |
| Beech Creek-Fox-Long Cr. | Poor | Poor |
| Bridge-Mountain Creeks | Poor | Poor |
| Camas Creek | Poor | Poor |
| Cherry Creek | Poor | Poor |
| Indian-Pine Creeks | Poor | Poor |
| John Day River, Main Fork | Poor | Poor |
| John Day River, Mid. Fork | Poor | Poor |
| John Day River, N. Fork | Poor | Poor |
| John Day River, S. Fork | Poor | Poor |
| Monument-Kimberly | Poor | Poor |
| Strawberry Creek | Fair | Poor |

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|-----------|-----------------|---------------------------|-----------|-----------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT. OF AVERAGE ⁱ |
|----------------|---------------------------------|--------------------|-----------------|-----------------|---|
| NO. | NAME | | | | |
| 0385 | John Day at Prairie City | 20 | April-July | 46 | 44 |
| | | 23 | April-Sept. | 51 | 45 |
| 0440 | John Day, Middle Fork at Ritter | 57 | April-July | 127 | 45 |
| | | 60 | April-Sept. | 131 | 46 |
| 0375 | Strawberry near Prairie City | 5.6 | April-July | 8.1 | 69 |
| | | 6.0 | April-Sept. | 8.8 | 68 |

SOIL MOISTURE

| STATION | | PROFILE (Inches) | | SOIL MOISTURE (Inches) | | | |
|-----------------------|------|------------------|----------|------------------------|-----------|-----------|-------------|
| | | DEPTH | CAPACITY | DATE | THIS YEAR | LAST YEAR | 2 YEARS AGO |
| | NAME | ELEVATION | | | | | |
| Battle Mtn. Summit | 4340 | 48 | 13.8 | 3/28 | 12.9 | 13.8 | 12.9 |
| Beech Creek | 4800 | 48 | 21.3 | 3/27 | 15.1 | 17.4 | 12.4 |
| Blue Mountain Springs | 5900 | 42 | 16.9 | 3/28 | 12.6 | 11.8 | 8.8 |
| Blue Mountain Summit | 5100 | 36 | 16.8 | 3/27 | 11.7 | 12.3 | 9.9 |
| Derr | 5670 | 24 | 9.0 | 3/27 | 8.9 | 8.1 | 8.5 |
| Marks Creek | 4540 | 36 | 14.1 | 3/27 | 11.8* | 13.6 | 13.6 |
| Snow Mountain | 6300 | 48 | 16.7 | 4/1 | 12.2 | 15.5 | 12.3 |
| Starr Ridge | 5150 | 36 | 10.6 | 3/28 | 10.5 | 10.5 | 9.0 |
| Williams Ranch | 4500 | 42 | 17.9 | b | | | |

*Accuracy questioned.

SNOW

| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|-----------------------|-----------|---------------------|---------------------|------------------------|------------------------|-------------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Anthony Lake | 7125 | 3/28 | 55 | 19.5 | 29.8 | 28.9 |
| Arbuckle Mountain | 5400 | 3/29 | 0 | 0.0 | 8.1 | 12.7 |
| Battle Mtn. Summit | 4340 | 3/28 | 0 | 0.0 | 0.6 | 2.2 ^m |
| Beech Creek Summit | 4800 | 3/27 | 0 | 0.0 | 3.2 | 4.6 |
| Blue Mountain Springs | 5900 | 3/28 | 23 | 8.8 | 16.4 | 17.3 |
| Blue Mountain Summit | 5098 | 3/27 | 8 | 3.0 | 7.4 | 8.6 |
| Derr | 5670 | 3/27 | 1 | 0.5 | 9.4 | 11.0 |
| East Fork Canyon | 5700 | 3/31 | 0 | 0.0 | 9.0 | - - |
| Gold Center | 5340 | 3/25 | 16 | 6.5 | 11.1 | 13.7 |
| Indian Creek Butte | 6550 | 3/31 | 30 | 11.4 | 23.4 | - - |
| Izee Summit | 5293 | 3/28 | 0 | 0.0 | 7.0 | 8.8 |
| Lucky Strike | 5050 | 3/27 | 11 | 4.0 | 12.3 | 14.6 ^h |
| Marks Creek | 4540 | 3/27 | 0 | 0.0 | 1.5 | 2.4 |
| Ochoco Meadows | 5200 | 3/30 | 0 | 0.0 | 10.1 | 11.6 |
| Olive Lake | 6000 | 3/29 | 35 | 11.7 | 18.2 | 22.5 |
| Schoolmarm | 4775 | 3/29 | 1 | 0.1 | 3.8 | 5.2 ^h |
| Snow Mountain | 6300 | 4/1 | 9 | 3.2 | 15.6 | 14.7 |
| Starr Ridge | 5150 | 3/28 | 0 | 0.0 | 4.2 | 5.3 |
| Tipton | 5100 | 3/27 | 6 | 2.6 | 9.1 | 11.0 ^h |
| Williams Ranch | 4500 | 3/31 | 0 | 0.0 | - - | - - |

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

| STREAM or AREA | FLOW PERIOD | |
|----------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Arnold Irrigation District | Average | Fair |
| Bear Creek | Poor | Poor |
| Beaver Creek | Poor | Poor |
| Camp Creek | Poor | Poor |
| Central Ore. Irrig. Dist. | Average | Fair |
| Crooked River | Poor | Poor |
| Deschutes River | Fair | Poor |
| Hay-Trout Creeks | Poor | Poor |
| Lone Pine Irrig. Dist. | Average | Fair |
| Mill Creek | Poor | Poor |
| North Unit Irrig. Dist. | Fair | Poor |
| Ochoco Creek | Poor | Poor |
| Sisters Irrigation Dist. | Fair | Poor |
| Snow Creek Irrig. Dist. | Fair | Fair |
| Squaw Creek Irrig. Dist. | Average | Fair |
| Swalley Ditch | Average | Average |
| Tumalo Project | Average | Fair |
| Walker Basin Irrig. Dist. | Fair | Poor |

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|---------------|-----------------|---------------------------|-----------|-----------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| Crane Prairie | 55.3 | 34.2 | 38.8 | 46.5 |
| Crescent Lake | 86.9 | 47.5 | 55.2 | 45.9 |
| Ochoco | 47.5 | 18.9 | 29.0 | 32.1 |
| Prineville | 153.0 | 123.1 | 128.2 | - - |
| Wickiup | 200.0 | 170.8 | 180.6 | 188.2 |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT. OF AVERAGE ⁱ |
|----------------|--|--------------------|-----------------|-----------------|---|
| NO. | NAME | | | | |
| 0535 | Crane Prairie Reservoir total Inflow | 58 | April-July | 94 | 62 |
| | | 86 | April-Sept. | 143 | 60 |
| 0600 | Crescent at Crescent Lake ^d | 7.1 | April-July | 26 | 27 |
| | | 9.1 | April-Sept. | 33 | 28 |
| 0795 | Crooked near Post | 28 | April-July | 123 | 23 |
| | | 30 | April-Sept. | 125 | 24 |
| 0645 | Deschutes at Benham Falls ^d | 194 | April-July | 417 | 46 |
| | | 312 | April-Sept. | 631 | 49 |
| 0500 | Deschutes below Snow Creek | 40 | April-Sept. | 75 | 53 |
| 0630 | Deschutes, Little near Lapine ^d | 28 | April-July | 99 | 28 |
| | | 31 | April-Sept. | 113 | 27 |
| 0848 | Ochoco Reservoir net Inflow | 4.0 | April-Sept. | 32 | 12 |
| 0555 | Odell near Crescent | 20 | April-Sept. | 34 | 59 |
| 0750 | Squaw near Sisters | 38 | April-Sept. | 56 | 68 |
| 0730 | Tumalo near Bend ^d | 39 | April-Sept. | 54 | 72 |

SOIL MOISTURE

| STATION | | PROFILE (Inches) | | SOIL MOISTURE (Inches) | | | |
|---------------|-----------|------------------|----------|------------------------|-----------|-----------|-------------|
| | | DEPTH | CAPACITY | DATE | THIS YEAR | LAST YEAR | 2 YEARS AGO |
| NAME | ELEVATION | | | | | | |
| Derr | 5670 | 24 | 9.0 | 3/27 | 8.9 | 8.1 | 8.5 |
| Marks Creek | 4540 | 36 | 14.1 | 3/27 | 11.8 | 13.6 | 13.6 |
| Snow Mountain | 6300 | 48 | 16.7 | 4/1 | 12.2 | 15.5 | 12.3 |

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

Upper Deschutes, Crooked Watersheds

SNOW

| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|----------------------|-----------|---------------------|---------------------|------------------------|------------------------|-------------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Black Pine Spring | 4600 | 3/25 | 0 | 0.0 | 0.0 | 5.2 ^h |
| Caldwell Ranch | 4400 | 3/26 | 1 | 0.3 | 7.8 | 11.0 |
| Cascade Summit | 4880 | 4/1 | 36 | 14.9 | 29.9 | 36.2 |
| Chemult | 4760 | 3/28 | 2 | 0.9 | 9.9 | 10.5 |
| Deer Creek | 4554 | 3/26 | 26 | 10.1 | 16.9 | - - |
| Derr | 5670 | 3/27 | 1 | 0.5 | 9.4 | 11.0 |
| Fire Road | 5050 | 3/25 | 0 | 0.0 | 6.5 | 6.7 ^h |
| Hogg Pass | 4755 | 4/1 | 50 | 21.1 | 41.6 | 49.7 |
| Hungry Flat | 4400 | 3/25 | 0 | 0.0 | T | 4.2 ^h |
| Irish-Taylor | 5500 | 3/26 | 52 | 19.3 | 37.8 | 44.6 ^h |
| Marks Creek | 4540 | 3/27 | 0 | 0.0 | 1.5 | 2.4 |
| Mowich | 4700 | 3/26 | 0 | 0.0 | 5.2 | 2.9 ^h |
| New Crescent Lake | 4800 | 3/27 | 10 | 4.8 | 15.0 | 17.8 ^h |
| New Dutchman Flat #2 | 6400 | 3/25 | 61 | 25.1 | 52.6 | 57.7 |
| Ochoco Meadows | 5200 | 3/30 | 0 | 0.0 | 10.1 | 11.6 |
| Paulina Lake | 6330 | 3/25 | 24 | 9.0 | 20.7 | 22.0 ^h |
| Paulina Prairie | 4285 | 3/25 | 0 | 0.0 | 0.0 | 0.3 ^h |
| Snow Mountain | 6300 | 4/1 | 9 | 3.2 | 15.6 | 14.7 |
| Tamarack | 4800 | 3/28 | 0 | 0.0 | 4.1 | - - |
| Tangent | 5400 | 3/25 | 32 | 12.4 | 20.8 | 25.0 ^h |
| Three Creeks Butte | 5200 | 3/25 | 5 | 0.7 | 6.4 | 12.9 ^h |
| Three Creeks Meadows | 5650 | 3/25 | 19 | 7.5 | 15.6 | 23.6 |
| Waldo Lake | 5500 | 3/27 | 48 | 17.3 | 32.7 | 35.8 ^h |
| Willamette Pass | 5600 | 3/27 | 66 | 24.4 | 42.7 | 46.3 ^h |
| Windigo Pass | 5800 | 3/27 | 60 | 22.7 | 38.4 | 48.7 |

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS OREGON

as of

APRIL 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Extremely deficient streamflows are forecast for Hood River and Wasco counties for the summer of 1968 and most water users can expect serious shortages this season.

SNOW COVER

Water content of the scant remaining mountain snowpack is only 25 percent of the 15-year April first average (1948-62).

PRECIPITATION and SOIL MOISTURE

Winter precipitation, November through March, has been only 63 percent of the 15-year average according to the U. S. Weather Bureau. In March the amount was only 24 percent of the average. Soil moisture is very good in most local areas.

RESERVOIR STORAGE

Water stored in small reservoirs is far short of this season's needs.

STREAMFLOW

The following forecasts of streamflow are compared with the 15-year average (1948-62) and are made with the assumption that near average conditions of temperature and precipitation will prevail during the forecast period:

| <u>Stream Station</u> | <u>Period</u> | <u>Acre Feet</u> | <u>Percent Average</u> |
|----------------------------|---------------|------------------|------------------------|
| Hood R. near Hood River | April-Sept. | 194,000 | 51 |
| West Fork Hood River | April-Sept. | 100,000 | 55 |
| White R. below Tygh Valley | April-Sept. | 55,000 | 31 |

Flows of Mill Creek, the Mile Creeks and small tributaries of Hood and White Rivers will be extremely short this season.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

| STREAM or AREA | FLOW PERIOD | |
|-----------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Aldridge Ditch (Tony Creek) | Poor | Poor |
| Badger Creek | Poor | Poor |
| Dee Irrigation District | Poor | Poor |
| East Fork Irrigation Dist. | Poor | Poor |
| Farmers Irrigation Dist. | Poor | Poor |
| Hood River Irrig. Dist. | Poor | Poor |
| Juniper Flat | Poor | Poor |
| Middle Fork Irrig. Dist. | Poor | Poor |
| Mile Creeks | Poor | Poor |
| Mill Creek | Poor | Poor |
| Mount Hood Irrig. Dist. | Poor | Poor |
| Rock-Gate-Threemile Crs. | Poor | Poor |
| Tygh Creek | Poor | Poor |
| White River | Poor | Poor |

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|------------|-----------------|---------------------------|-----------|-----------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| Clear Lake | 11.9 | 3.4 | 2.6 | - - |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

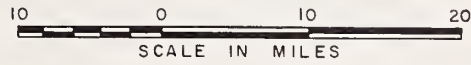
| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT. OF AVERAGE ⁱ |
|----------------|-----------------------------------|--------------------|-----------------|-----------------|---|
| NO. | NAME | | | | |
| 1210 | Hood near Hood River ^d | 149 | April-July | 322 | 46 |
| | | 194 | April-Sept. | 381 | 51 |
| 1185 | Hood, West Fork near Dee | 84 | April-July | 155 | 54 |
| | | 100 | April-Sept. | 179 | 55 |
| 1015 | White below Tygh Valley | 40 | April-July | 158 | 25 |
| | | 55 | April-Sept. | 176 | 31 |

SNOW

| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|---------------------------|-----------|---------------------|---------------------|------------------------|------------------------|-----------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Brooks Meadows | 4300 | 3/29 | 0 | 0.0 | 11.0 | 14.5 |
| Clear Lake | 3500 | 3/28 | 0 | 0.0 | 5.8 | 14.5 |
| Clear Lake (Experimental) | 3500 | 3/28 | 0 | 0.0 | 13.5 | - - |
| Cooper Spur | 3490 | 4/1 | 0 | 0.0 | 6.0 | - - |
| Greenpoint Reservoir | 3400 | 3/28 | 5 | 2.0 | 13.0 | 19.2 |
| Knebal Springs | 3850 | 3/29 | 0 | 0.0 | - - | - - |
| Lambert Point | 7000 | c | | | | |
| Parkdale | 1770 | c | | | | |
| Phlox Point | 5400 | 3/28 | 59 | 24.0 | 61.9 | 70.4 |
| Red Hill | 4400 | 3/27 | 30 | 14.2 | 30.2 | 52.9 |
| Still Creek | 3670 | 3/28 | 11 | 4.3 | 21.8 | 29.3 |
| Switchback | 3255 | 4/1 | 0 | 0.0 | 11.0 | - - |
| Tilly Jane | 6000 | 3/23 | 33 | 13.4 | 34.7 | 50.1 |
| Ulrich Ranch Junction | 3350 | 3/29 | 0 | 0.0 | - - | - - |
| Umbrella Falls | 5400 | 3/30 | 85 | 35.8 | 69.2 | - - |
| Upper Valley | 2530 | c | | | | |

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

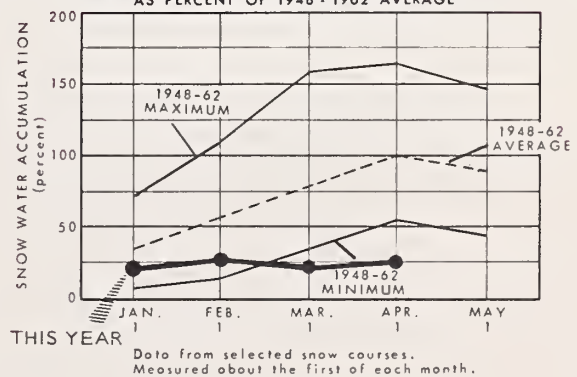
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ┐ Soil Moisture Station
- └ Precipitation Gage
- q Temperature Gage
- ⚡ Radio Telemetry

SNOW WATER ACCUMULATION IN AREA 6 AS PERCENT OF 1948-1962 AVERAGE





WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of
APRIL 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Less than average snowmelt season streamflow is in prospect on practically all Columbia Basin streams. Headwater tributaries of the Clark Fork and the Snake will have near average flows. Streamflow will be extremely deficient throughout Oregon, southern Washington and southwestern Idaho. Good carryover reservoir storage will offset shortages in many areas. Water shortages are expected in Oregon in those areas without adequate stored water supplies.

SNOW COVER

Except for a further decline in mountain snowpack with respect to average in Oregon during March, the snow cover pattern in the Columbia Basin remains much the same as on March 1. The snowpack in Canada on the Columbia River headwaters ranged from 85 percent of average on the Kootenai to 115 percent on the main stem with 110 percent reported on the Okanogan. The upper reaches of the Snake have a near average snowpack. The snow declines rapidly on the Boise and the lower reaches of the Salmon and Clearwater. In Montana the upper headwaters of the Clark Fork and Kootenai range from slightly above to slightly below average. In the Blue Mountains in southeastern Washington the April 1 snowpack is 50 percent of average. Deficient snowfall continued in Oregon during March and the current snowpack ranges from 10 to 50 percent of average.

SOIL MOISTURE

In general soil moisture conditions in the Basin are good. Snowmelt at the median elevations, coupled with rainfall, has primed the soil to a near average condition. Soils will dry out rapidly due to the lack of snow unless offset by spring rains. There is a strong likelihood that a large portion of the forest lands in Oregon, eastern Washington and Idaho will be very dry by late summer or early fall.

STREAMFLOW

Flow of the Columbia River at The Dalles, Oregon, as reported by the U. S. Geological Survey, was slightly below average during the fall. In February and March the flow was moderately above average, reflecting unseasonable midwinter snowmelt and rain. The record by months for the 1968 water year to date was as follows:

| <u>Month</u> | <u>Percent of Average Discharge (1948-62)</u> | | | |
|--------------|---|------------------------|---|---|
| October | 96 | (Adjusted for storage) | | |
| November | 99 | " | " | " |
| December | 88 | " | " | " |
| January | 96 | " | " | " |
| February | 129 | " | " | " |
| March | 118 | " | " | " |

Report prepared by
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1218 S. W. WASHINGTON ST.
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STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT OF AVERAGE ⁱ |
|----------------|------------------------|-----------------------|---------------------------|--------------------|--|
| NO. | NAME | | | | |
| 1057 | Columbia at The Dalles | 66,100 95,000 | April-June April-Sept. | 74,100 108,500 | 89 87 |

HISTORICAL DATA (Columbia River at The Dalles)

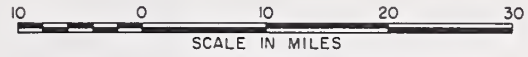
| YEAR | STREAMFLOW ^d (1,000 A.F.) | | | PEAK (1,000 c.f.s.) | DATE |
|--------------|--------------------------------------|-------------|------------|------------------------|---------|
| | APR. - SEPT. | APR. - JUNE | MAY - JUNE | | |
| 1943 | 115,000 | 75,300 | 52,400 | 541 | June 21 |
| 1944 | 61,900 | 39,200 | 32,100 | 326 | June 19 |
| 1945 | 81,600 | 54,600 | 47,300 | 505 | June 8 |
| 1946 | 108,100 | 75,400 | 59,600 | 581 | May 30 |
| 1947 | 100,300 | 70,000 | 56,800 | 536 | May 11 |
| 1948 | 130,500 | 94,600 | 81,900 | 999 | May 31 |
| 1949 | 95,700 | 71,400 | 56,000 | 622 | May 18 |
| 1950 | 120,400 | 74,700 | 61,200 | 744 | June 25 |
| 1951 | 113,000 | 75,600 | 59,100 | 597 | May 26 |
| 1952 | 107,700 | 77,500 | 57,300 | 557 | May 28 |
| 1953 | 100,600 | 64,900 | 55,800 | 609 | June 17 |
| 1954 | 119,500 | 70,500 | 59,300 | 561 | May 23 |
| 1955 | 99,500 | 58,300 | 50,300 | 545 | June 26 |
| 1956 | 131,400 | 96,900 | 75,800 | 815 | June 3 |
| 1957 | 105,700 | 80,500 | 67,200 | 700 | May 22 |
| 1958 | 97,700 | 72,000 | 58,600 | 593 | May 31 |
| 1959 | 112,500 | 71,900 | 58,900 | 555 | June 23 |
| 1960 | 97,000 | 64,000 | 48,000 | 442 | June 6 |
| 1961 | 101,400 | 74,400 | 64,000 | 699 | June 8 |
| 1962 | 94,600 | 64,100 | 49,200 | 460 | June 5 |
| 1948-62 Avg. | 108,500 | 74,100 | 60,200 | 633 | |
| 1963 | 87,000 | 56,300 | 46,200 | 437 | June 18 |
| 1964 | 109,020 | 70,739 | 61,313 | 662 | June 18 |

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

| VANCOUVER GAGE (Weather Bu.) | FLOW AT THE DALLES (1,000 c.f.s.) | DRAINAGE DISTRICT PUMPHOUSE | | | | | | |
|------------------------------------|---|-----------------------------|-------------|-----------|-----------|---------|--------|---------|
| | | SANDY | SAUVIE ISL. | SCAPPOOSE | DEER ISL. | RAINIER | BEAVER | WOODSON |
| | | RIVER MILES | | | | | | |
| | | 118.9 | 96.0 | 91.0 | 77.0 | 62.0 | 52.0 | 47.0 |
| 35 (1894) | 1210 | 41.2 | 34.2 | 33.3 | 28.5 | 21.9 | 17.5 | 15.5 |
| 34 | 1160 | 40.5 | 33.5 | 32.5 | 27.7 | 21.2 | 17.0 | 15.0 |
| 33 | 1100 | 39.6 | 32.4 | 31.4 | 26.7 | 20.2 | 16.1 | 14.3 |
| 32 | 1050 | 38.9 | 31.5 | 30.5 | 25.7 | 19.5 | 15.4 | 13.7 |
| 31 (1948) | 1000 | 38.0 | 30.7 | 29.5 | 25.1 | 18.8 | 14.7 | 13.0 |
| 30 | 943 | 36.6 | 29.5 | 28.5 | 24.3 | 18.1 | 14.0 | 12.4 |
| 29 | 897 | 35.5 | 28.5 | 27.7 | 23.7 | 17.5 | 13.4 | 11.8 |
| 28 | 853 | 34.3 | 27.5 | 26.7 | 22.8 | 17.0 | 13.0 | 11.4 |
| 27 (1956) | 811 | 33.0 | 26.5 | 25.6 | 21.8 | 16.2 | 12.5 | 11.0 |
| 26 (1950) | 771 | 32.1 | 25.5 | 24.6 | 20.9 | 15.5 | 12.2 | 10.7 |
| 25 | 733 | 30.7 | 24.2 | 23.2 | 19.7 | 14.6 | 11.7 | 10.3 |
| 24 | 697 | 29.7 | 23.0 | 22.2 | 19.0 | 14.1 | 11.4 | 10.2 |
| 23 | 662 | 29.0 | 22.3 | 21.4 | 18.4 | 13.6 | 11.2 | 10.0 |
| 22 | 628 | 28.1 | 21.4 | 20.3 | 17.2 | 13.0 | 10.9 | 9.7 |
| 21 | 595 | 27.2 | 20.7 | 19.5 | 16.4 | 12.6 | 10.6 | 9.6 |
| 20 (1954) | 564 | 26.2 | 19.8 | 18.6 | 15.5 | 12.1 | 10.2 | 9.4 |
| 19 | 534 | 25.5 | 19.2 | 18.0 | 15.0 | 11.8 | 10.0 | 9.3 |
| 18 | 501 | 24.4 | 18.3 | 17.2 | 14.3 | 11.4 | 9.8 | 9.1 |
| 17 | 479 | 23.4 | 17.4 | 16.4 | 13.7 | 11.0 | 9.6 | 8.9 |
| 16 | 452 | 22.4 | 16.5 | 15.5 | 13.0 | 10.5 | 9.3 | 8.7 |

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

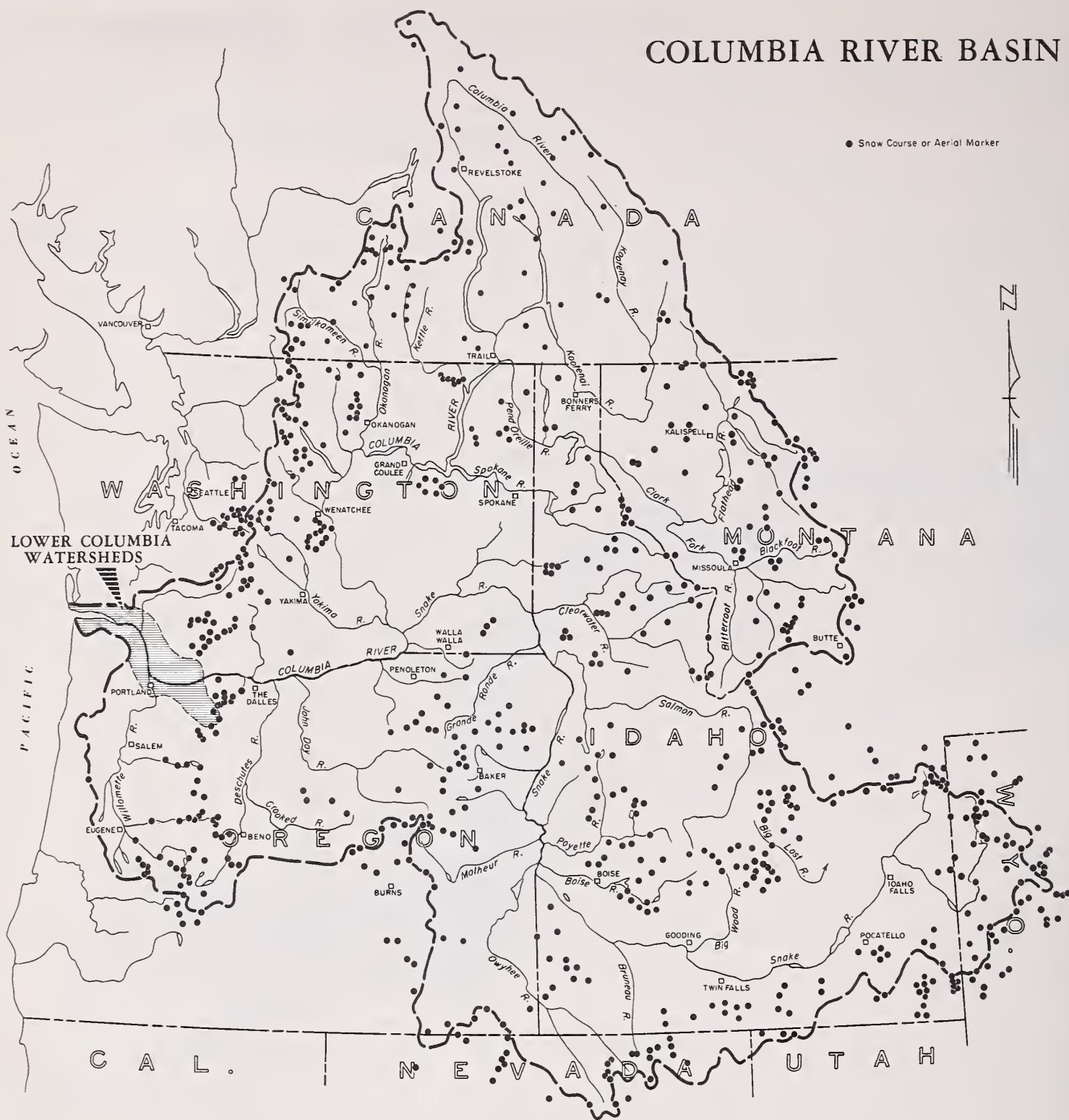
LOWER COLUMBIA WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- (50) River Miles
- Snow Course
- 9 Temperature
- ⚡ Radio Telemetry

COLUMBIA RIVER BASIN



"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

APRIL 1, 1968



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Some early season shortages of water supplies are forecast for most irrigated lands in the Willamette Valley followed by serious shortages in the latter part of the season except where adequate supplies of stored water or ground water are available.

SNOW COVER

Water content of the scanty mountain snowpack has decreased to only 41 per cent of the 15-year April first average (1948-62). Almost all of the snow is located in the forested areas above the 4500 foot level.

PRECIPITATION and SOIL MOISTURE

Winter precipitation, November through March, has been 73 percent of the 15-year average according to the U. S. Weather Bureau. March precipitation was only 57 percent of the average. Moisture in all soils is greater than usual for this date.

RESERVOIR STORAGE

Willamette Basin reservoirs serve multiple purposes and current levels of storage are close to the usual amounts on hand on April first. Many of these reservoirs have blocks of stored water which can be made available for irrigation purposes.

STREAMFLOW

The following forecasts of streamflow are compared with the 15-year average (1948-62) and are made with the assumption that near average conditions of temperature and precipitation will prevail during the forecast period:

| <u>Stream Station</u> | <u>Period</u> | <u>Acre Feet</u> | <u>Percent Average</u> |
|--------------------------------|---------------|------------------|------------------------|
| Row River near Dorena | Apr.-Sept. | 70,000 | 62 |
| Middle Fork Willamette | Apr.-Sept. | 580,000 | 60 |
| McKenzie R. at McKenzie Bridge | Apr.-Sept. | 410,000 | 62 |
| South Santiam - Waterloo | Apr.-Sept. | 440,000 | 65 |
| North Santiam - Mehama | Apr.-Sept. | 590,000 | 60 |
| Willamette at Salem | Apr.-Sept. | 3,800,000 | 68 |
| Clackamas R. at Estacada | Apr.-Sept. | 585,000 | 66 |

Report prepared by

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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

| STREAM or AREA | FLOW PERIOD | |
|-------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Calapooya | Fair | Poor |
| Clackamas | Fair | Poor |
| McKenzie | Fair | Poor |
| Molalla | Fair | Poor |
| Santiam, North | Fair | Poor |
| Santiam, South | Fair | Poor |
| Willamette, Coast Fork | Fair | Poor |
| Willamette, Middle Fork | Fair | Poor |

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|---------------|-----------------|---------------------------|-----------|--------------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| Cottage Grove | 30.0* | 16.4 | 16.2 | 18.3 |
| Cougar | 155.2* | 91.2 | 69.5 | - - |
| Detroit | 299.9* | 212.8 | 146.6 | 173.5 ^m |
| Dorena | 70.5* | 40.7 | 35.3 | 38.7 ^m |
| Fall Creek | 115.0* | 75.0 | 73.6 | - - |
| Fern Ridge | 94.2* | 81.6 | 71.0 | 67.1 |
| Foster | 30.0* | 0.0 | - - | - - |
| Green Peter | 270.0* | 166.9 | - - | - - |
| Hills Creek | 200.0* | 131.4 | 105.8 | - - |
| Lookout Point | 337.2* | 188.1 | 143.2 | 183.0 ^m |
| Timothy Lake | 61.7 | 31.0 | 54.1 | 46.2 ^m |

*Multiple purpose reservoir--space reserved primarily for flood runoff.

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT OF AVERAGE ⁱ |
|----------------|--|--------------------|-----------------|-----------------|--|
| NO. | NAME | | | | |
| 2080 | Clackamas at Big Bottom | 97 | April-July | 150 | 65 |
| | | 122 | April-Sept. | 184 | 66 |
| 2100 | Clackamas at Estacada | 480 | April-July | 770 | 62 |
| | | 585 | April-Sept. | 890 | 66 |
| 2095 | Clackamas above Three Lynx | 360 | April-July | 584 | 62 |
| | | 450 | April-Sept. | 683 | 66 |
| 1590 | McKenzie at McKenzie Bridge | 300 | April-July | 502 | 60 |
| | | 410 | April-Sept. | 658 | 62 |
| 1625 | McKenzie near Vida | 800 | April-July | 1144 | 70 |
| | | 1000 | April-Sept. | 1392 | 72 |
| 2090 | Oak Grove Fork above Power Intake | 98 | April-July | 147 | 67 |
| | | 128 | April-Sept. | 190 | 67 |
| 1545 | Row near Dorena | 65 | April-July | 108 | 60 |
| | | 70 | April-Sept. | 112 | 62 |
| 1830 | Santiam, North at Mehama ^d | 510 | April-July | 884 | 58 |
| | | 590 | April-Sept. | 991 | 60 |
| 1875 | Santiam, South at Waterloo | 400 | April-July | 637 | 63 |
| | | 440 | April-Sept. | 675 | 65 |
| 1480 | Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge ^d | 494 | April-July | 863 | 57 |
| | | 580 | April-Sept. | 968 | 60 |
| 1910 | Willamette at Salem ^d | 3300 | April-July | 5040 | 65 |
| | | 3800 | April-Sept. | 5566 | 68 |

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS

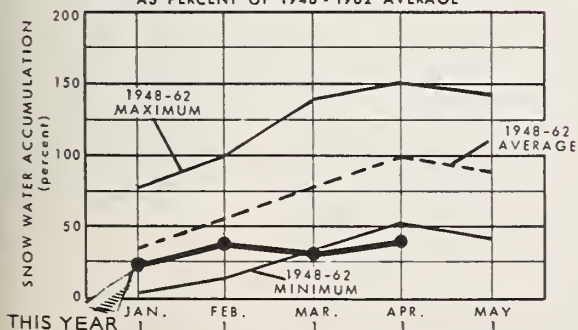
LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⚡ Radio Telemetry
- ⌈ Precipitation Gage
- ⌋ Temperature Gage

10 0 10 20 30
SCALE IN MILES



SNOW WATER ACCUMULATION IN AREA 8 AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

| STREAM or AREA | FLOW PERIOD | |
|----------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Althouse Creek | Fair | Poor |
| Applegate River, Big | Average | Fair |
| Applegate River, Little | Average | Fair |
| Ashland Creek | Average | Fair |
| Butte Creek, Big | Average | Fair |
| Butte Creek, Little | Average | Fair |
| Cow Creek | Fair | Poor |
| Deer Creek | Fair | Poor |
| Elk Creek | Average | Fair |
| Emigrant Creek (abv. Res.) | Fair | Poor |
| Evans Creek | Fair | Poor |
| Gold Hill Irrigation Dist. | Average | Fair |
| Grants Pass Irrig. Dist. | Average | Fair |
| Grave Creek | Fair | Poor |
| Illinois River, East Fork | Average | Fair |
| Illinois River, West Fork | Average | Fair |
| Jump-off-Joe Creek | Fair | Poor |
| Neil Creek | Average | Fair |
| Red Blanket Creek | Average | Fair |
| Rogue River | Average | Fair |
| Sucker Creek | Average | Fair |
| Table Rock Irrig. Dist. | Average | Fair |
| Thompson Creek | Average | Fair |
| Wagner Creek | Average | Fair |
| Williams Creek | Average | Fair |

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

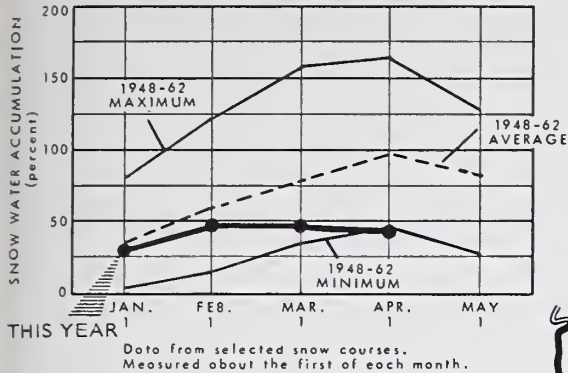
| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|--|-----------------|---------------------------|-----------|-----------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| Emigrant Gap | 39.0 | 31.0 | 38.8 | 35.0* |
| Fish Lake | 7.8 | 3.9 | 4.3** | 5.7 |
| Fourmile Lake | 16.1 | 3.5 | 5.5** | 9.5 |
| Howard Prairie | 60.0 | 41.5 | 37.7 | - - |
| Hyatt Prairie | 16.1 | 10.8 | 12.7 | 9.4 |
| *Average for years of record after reconstruction. | | | | |
| **March 23 | | | | |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT. OF AVERAGE ⁱ |
|----------------|---|--------------------|-----------------|-----------------|---|
| NO. | NAME | | | | |
| 3620 | Applegate near Copper | 105 | April-Sept. | 142 | 74 |
| 3145 | Clearwater above Trap Creek ^d | 55 | April-Sept. | 75 | 73 |
| 5045 | Fourmile Lake net Inflow ^d | 2.8 | April-Sept. | 5.4 | 52 |
| 5140 | Hyatt Reservoir net Inflow ^d | 2.1 | April-Sept. | 5.8 | 36 |
| 3771 | Illinois River near Kerby | 156 | April-July | 206 | 76 |
| | | 160 | April-Sept. | 212 | 75 |
| 3425 | Little Butte, N. Fk. at Fish Lk. nr. Lake Cr. ^d | 9.5 | April-Sept. | 16.0 | 59 |
| 3415 | Little Butte, So. Fk. nr. Lake Creek | 17.0 | April-July | 38 | 45 |
| | Note: Minimum flow will drop to 100 c.f.s. by May 9th. | | | | |
| 3280 | Rogue above Prospect | 200 | April-July | 295 | 68 |
| | | 250 | April-Sept. | 355 | 70 |
| 3320 | Rogue, South Fork near Prospect ^d | 45 | April-July | 70 | 64 |
| | | 55 | April-Sept. | 82 | 67 |
| 3350 | Rogue River below South Fork | 390 | April-July | 611 | 64 |
| | | 490 | April-Sept. | 754 | 65 |
| 3590 | Rogue at Raygold near Central Point | 530 | April-July | 837 | 63 |
| | | 650 | April-Sept. | 1001 | 65 |
| 3615 | Rogue at Grants Pass | 625 | April-Sept. | 993 | 63 |
| 3135 | Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d | 130 | April-Sept. | 186 | 70 |

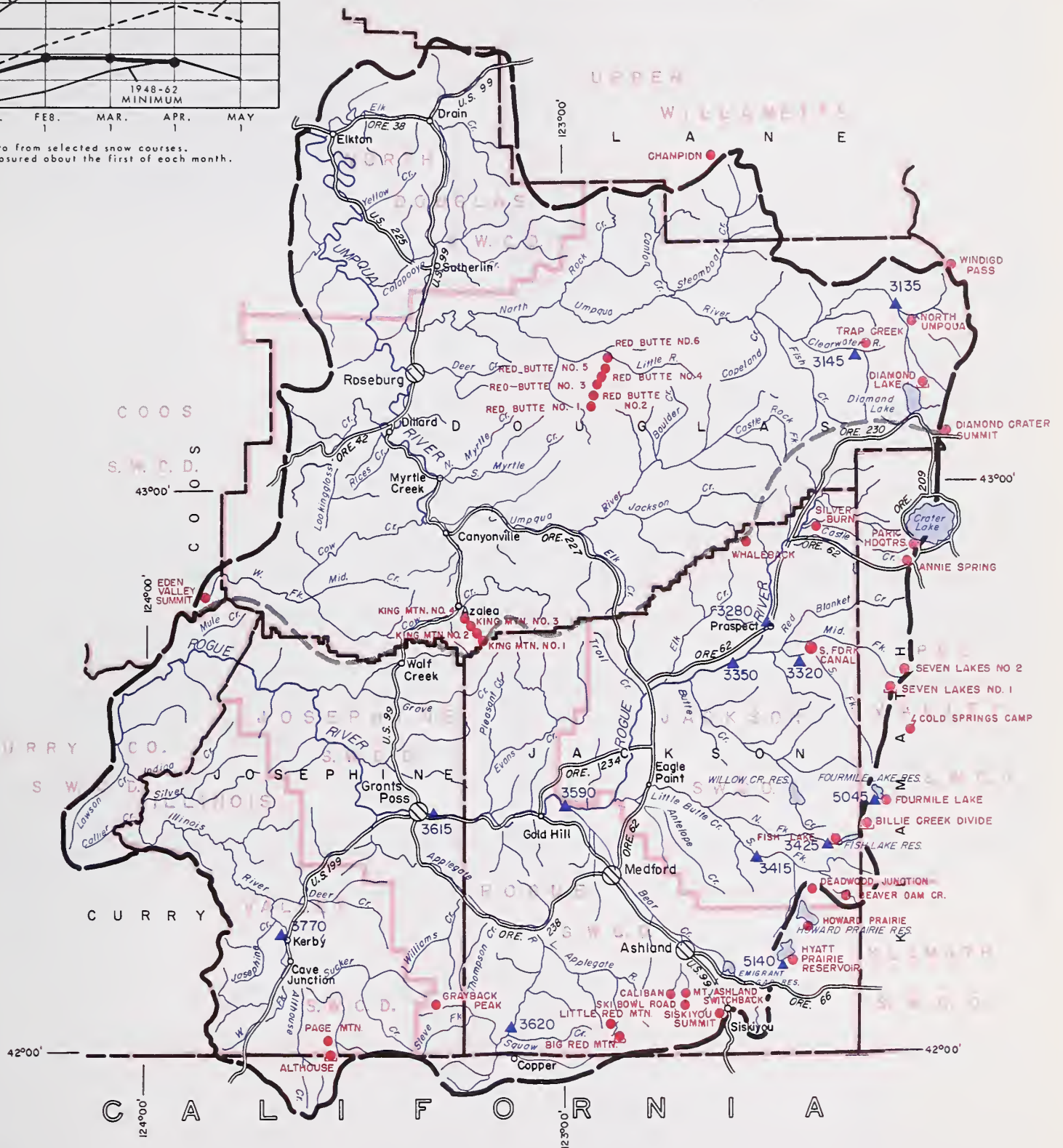
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

SNOW WATER ACCUMULATION IN AREA 9
AS PERCENT OF 1948 - 1962 AVERAGE



ROGUE, UMPQUA WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⌒ Precipitation Gage
- ⚡ Radio Telemetry

Rogue, Umpqua Watersheds

SNOW

| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|-------------------------|-----------|---------------------|---------------------|------------------------|------------------------|-------------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Althouse | 4530 | 3/29 | 0 | 0.0 | 8.2 | 7.2 |
| Annie Spring | 6018 | 3/29 | 75 | 30.0 | 50.0 | 49.7 |
| Beaver Dam Creek | 5100 | 3/30 | 6 | 2.3 | 13.6 | - - |
| Big Red Mountain | 6500 | 3/26 | 65 | 25.0 | 34.1 | 32.6 |
| Billie Creek Divide | 5300 | 3/25 | 23 | 8.1 | 21.8 | 25.4 |
| Caliban | 6500 | 3/28 | 78 | 31.7 | 39.0 | - - |
| Champion | 4500 | 4/1 | 24 | 11.9 | 31.8 | 33.8 |
| Cold Springs Camp | 6100 | 3/29 | 44 | 18.6 | 32.8 | - - |
| Deadwood Junction | 4600 | 3/30 | 0 | 0.0 | 10.3 | - - |
| Diamond-Crater Summit | 5800 | 3/20 | 54 | 20.5 | 34.8 | - - |
| Diamond Lake | 5315 | 3/20 | 34 | 12.6 | 20.0 | 26.6 |
| Fish Lake | 4865 | b | | | | |
| Fourmile Lake | 6000 | b | | | | |
| Grayback Peak | 6000 | 3/25 | 46 | 15.9 | 29.4 | 30.5 |
| Howard Prairie | 4500 | 3/30 | 0 | 0.0 | 9.2 | - - |
| Hyatt Prairie Reservoir | 4900 | 3/20 | 0 | 0.0 | 7.6 | 9.6 ^h |
| King Mountain #1 | 4500 | 3/25 | 7 | 2.1 | - - | - - |
| King Mountain #2 | 4000 | 3/25 | 2 | 0.5 | - - | - - |
| King Mountain #3 | 3648 | 3/25 | 0 | 0.0 | - - | - - |
| King Mountain #4 | 3049 | 3/25 | 0 | 0.0 | - - | - - |
| King Mountain #5 | 2380 | 3/25 | 0 | 0.0 | - - | - - |
| King Mountain #6 | 1820 | 3/25 | 0 | 0.0 | - - | - - |
| Little Red Mountain | 6500 | 3/26 | 50 | 16.9 | 27.9 | 26.3 |
| Mt. Ashland Switchback | 6400 | 3/28 | 81 | 33.8 | 36.0 | - - |
| North Umpqua | 4215 | 3/29 | 3 | 1.3 | 15.5 | 16.4 |
| Page Mountain | 4045 | 3/29 | 0 | 0.0 | 2.6 | 4.9 ^h |
| Park Headquarters | 6450 | 3/29 | 97 | 40.2 | 60.7 | 62.1 |
| Red Butte #1 | 4560 | 3/22 | 16 | 4.8 | 19.2 | - - |
| Red Butte #2 | 4000 | 3/22 | 3 | 2.0 | 5.2 | - - |
| Red Butte #3 | 3500 | 3/22 | 0 | 0.0 | 0.0 | - - |
| Red Butte #4 | 3000 | 3/22 | 0 | 0.0 | 0.0 | - - |
| Red Butte #5 | 2500 | 3/22 | 0 | 0.0 | 0.0 | - - |
| Red Butte #6 | 2000 | 3/22 | 0 | 0.0 | 0.0 | - - |
| Seven Lakes #1 | 6800 | 3/27 | 73 | 30.9 | 59.6 | 64.3 ^h |
| Seven Lakes #2 | 6200 | 3/27 | 60 | 24.8 | 40.8 | 47.2 |
| Silver Burn | 3720 | 3/29 | 0 | 0.0 | 15.1 | 13.9 |
| Siskiyou Summit | 4630 | 3/30 | 0 | 0.0 | 2.9 | 3.6 |
| Ski Bowl Road | 6000 | 3/28 | 61 | 27.0 | 31.8 | - - |
| South Fork Canal | 3500 | 3/29 | 0 | 0.0 | 0.0 | 1.2 |
| Trap Creek | 3800 | 3/29 | 0 | 0.0 | 15.9 | 11.8 ^h |
| Whaleback | 5140 | 3/28 | 56 | 23.8 | 33.8 | 38.6 |
| Windigo Pass | 5800 | 3/27 | 60 | 22.7 | 38.4 | 48.7 |

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of

APRIL 1, 1968



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Klamath County farmers, ranchers and other water users can expect far below average water supplies this coming summer except where reservoired water is available and adequate.

SNOW COVER

Low elevation snow is now completely gone with snow remaining only at the higher elevations. Snow cover for Klamath County is only 42 percent of average.

SOIL MOISTURE and PRECIPITATION

Mountain soils remain wetted which will help any subsequent significant rainfall contribute directly to streamflow. According to U.S. Weather Bureau precipitation for November-March has been 67 percent of average. March precipitation was 41 percent of average.

RESERVOIR STORAGE

Storage in Upper Klamath Lake is 479,400 acre feet--slightly more than average. Gerber is holding 60,600 a.f. and Clear Lake contains 219,200 acre feet. Lands served from these reservoirs will have an adequate supply.

STREAMFLOW

Klamath County streams are forecast to flow as follows:

| <u>Stream Station</u> | <u>Period</u> | <u>Acre Feet</u> | <u>Percent Average</u> |
|----------------------------|---------------|------------------|------------------------|
| Clear Lake Inflow | April-Sept. | 20,000 | 42 |
| Gerber Inflow | April-Sept. | 5,500 | 24 |
| Spriguel R. near Chiloquin | April-Sept. | 150,000 | 52 |
| Upper Klamath Inflow | April-Sept. | 375,000 | 59 |
| Williamson below Sprague | April-Sept. | 277,000 | 56 |

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

| STREAM or AREA | FLOW PERIOD | |
|--------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Ft. Klamath Valley | Fair | Poor |
| Lost River (Clear Lake) | Average | Average |
| Lost River (Gerber) | Average | Average |
| Lost River (Willow Res.) | Fair | Fair |
| Sprague River | Fair | Poor |
| Upper Klamath Lake | Average | Average |
| Williamson River | Fair | Poor |

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|--------------------|-----------------|---------------------------|-----------|-----------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| Clear Lake | 440.2 | 219.2 | 219.2 | 235.5 |
| Gerber | 94.0 | 60.6 | 61.1 | 49.4 |
| Upper Klamath Lake | 584.0 | 479.4 | 465.4 | 461.8 |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT. OF AVERAGE ⁱ |
|----------------|--|--------------------|-----------------|-----------------|---|
| NO. | NAME | | | | |
| 823 | Clear Lake Reservoir Inflow ^k | 16 | April-June | 44 | 36 |
| | | 20 | April-Sept. | 48 | 42 |
| 8215 | Gerber Reservoir Inflow ^k | 5.3 | April-June | 22 | 24 |
| | | 5.5 | April-Sept. | 23 | 24 |
| 5010 | Sprague near Chiloquin | 138 | April-July | 256 | 54 |
| | | 150 | April-Sept. | 289 | 52 |
| 5070 | Upper Klamath Lake net Inflow ^k | 316 | April-July | 527 | 60 |
| | | 375 | April-Sept. | 639 | 59 |
| 5025 | Williamson below Sprague River | 277 | April-Sept. | 490 | 56 |

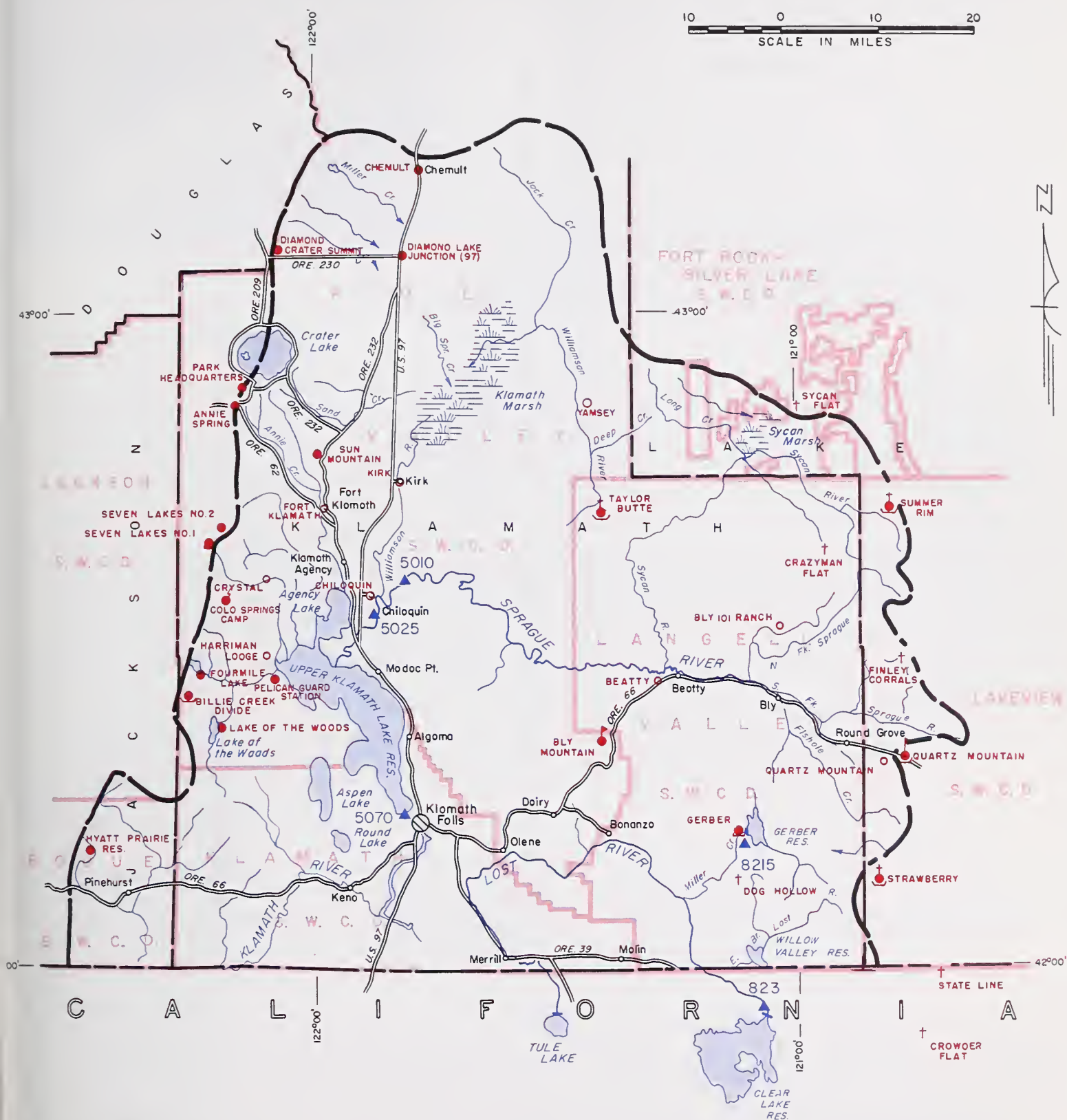
SOIL MOISTURE

| STATION | | PROFILE (Inches) | | SOIL MOISTURE (Inches) | | | |
|--------------|-----------|------------------|----------|------------------------|-----------|-----------|-------------|
| | | DEPTH | CAPACITY | DATE | THIS YEAR | LAST YEAR | 2 YEARS AGO |
| NAME | ELEVATION | | | | | | |
| Bly Mountain | 5090 | 42 | 14.0 | 3/22 | 11.7 | 11.7 | 12.2 |

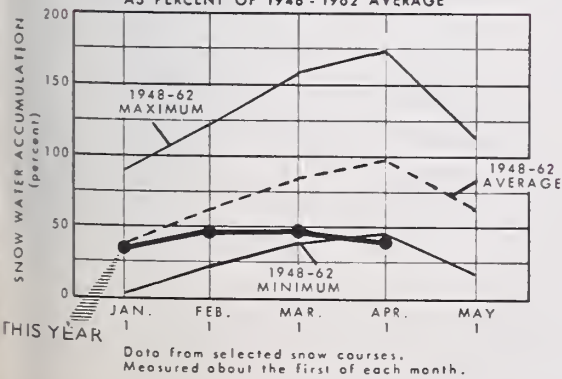
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS

10 0 10 20
SCALE IN MILES



SNOW WATER ACCUMULATION IN AREA 10
AS PERCENT OF 1948 - 1962 AVERAGE



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Gage
- ⚡ Radio Telemetry

Klamath Watersheds

SNOW

| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|------------------------------------|-----------|---------------------|---------------------|------------------------|------------------------|-------------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Annie Spring | 6018 | 3/29 | 75 | 30.0 | 50.0 | 49.7 |
| Beatty (PP&L) | 4300 | b | | | | |
| Billie Creek Divide | 5300 | 3/25 | 23 | 8.1 | 21.8 | 25.4 |
| Bly Mountain | 5090 | 3/22 | 0 | 0.0 | 8.1 | 3.9 ^m |
| Bly 101 Ranch (PP&L) | 4800 | b | | | | |
| Chemult | 4760 | 3/28 | 2 | 0.9 | 9.9 | 10.5 |
| Chiloquin (PP&L) | 4187 | b | | | | |
| Cold Springs Camp | 6100 | 3/29 | 44 | 18.6 | 32.8 | - - |
| Crazyman Flat ^e | 6100 | 3/27 | 9 | 3.4 | 10.2 | 10.3 ^m |
| Crowder Flat ^e (Calif.) | 5200 | 3/27 | 0 | 0.0 | 0.7 | 0.6 ^m |
| Crystal (PP&L) | 4200 | 3/30 | 0 | 0.0 | 7.8 | 7.2 |
| Diamond-Crater Summit | 5800 | 3/20 | 54 | 20.5 | 34.8 | - - |
| Diamond Lake Junction (97) | 4600 | 3/20 | 0 | 0.0 | 5.5 | - - |
| Dog Hollow ^e | 4900 | 3/27 | 0 | 0.0 | 0.0 | 0.0 ^m |
| Finley Corrals ^e | 6000 | 3/27 | 14 | 5.3 | 12.2 | 16.9 ^m |
| Fort Klamath (PP&L) | 4150 | 3/30 | 0 | 0.0 | 0.0 | 1.2 |
| Fourmile Lake | 6000 | b | | | | |
| Gerber | 4850 | 3/27 | 0 | 0.0 | - - | 0.8 ^h |
| Harriman (PP&L) | 4200 | 3/31 | 0 | 0.0 | 0.0 | 1.1 ^m |
| Hyatt Prairie Reservoir | 4900 | 3/30 | 0 | 0.0 | 7.6 | 9.6 ^h |
| Kirk (PP&L) | 4533 | 3/31 | 0 | 0.0 | - - | 2.1 ^m |
| Lake of the Woods | 4960 | 3/29 | 9 | 3.3 | 7.2 | 12.4 |
| Park Headquarters | 6450 | 3/29 | 97 | 40.2 | 60.7 | 62.1 |
| Pelican Guard Station | 4150 | 3/25 | 0 | 0.0 | 0.2 | - - |
| Quartz Mountain | 5320 | 3/28 | 0 | 0.0 | 7.8 | 5.7 |
| Quartz Mountain (PP&L) | 5504 | 3/28 | 6 | 3.0 | 9.8 | 6.1 |
| Seven Lakes #1 | 6800 | 3/27 | 73 | 30.9 | 59.6 | 64.3 ^h |
| Seven Lakes #2 | 6200 | 3/27 | 60 | 24.8 | 40.8 | 47.2 |
| State Line ^e (Calif.) | 5750 | 3/27 | 0 | 0.0 | 7.1 | 9.9 ^m |
| Strawberry | 5760 | 3/28 | 4 | 2.3 | 9.4 | 8.0 |
| Summer Rim | 7200 | 3/29 | 28 | 11.3 | 20.0 | 19.6 |
| Sun Mountain | 5350 | 3/21 | 36 | 13.9 | 24.7 | 28.6 |
| Sycan Flat ^e | 5500 | 3/27 | 0 | 0.0 | 8.3 | 4.6 ^m |
| Taylor Butte | 5100 | 3/26 | 0 | 0.0 | 6.9 | 4.5 ^h |
| Yamsey (PP&L) | 4600 | b | | | | |

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of
APRIL 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Extremely poor streamflow is forecast for the summer of 1968 in Lake County and most ranchers and other water users can expect extreme water shortages. The Lakeview Water Users, with stored water available, will have a satisfactory irrigation season but there will be little or no water left for carryover to next season which might also be on the dry side.

SNOW COVER

Water content of the very scanty snowpack has decreased to 32 percent of the 15-year April first average (1948-62). Snow levels are very close to the record-low figures.

PRECIPITATION and SOIL MOISTURE

Winter precipitation, November through March, has been only 68 percent of the 15-year average according to the U. S. Weather Bureau. March precipitation was only 36 percent of the average. Upper watershed soils gained additional moisture and are now wet to 71 percent of capacity.

RESERVOIR STORAGE

Drews reservoir held 47,700 acre feet on April first compared with 39,400 the previous year. Inflow to the reservoir is expected to be about 7,000 a.f. in the next few months. Cottonwood held 3,200 acre feet compared with 2,600 acre feet last year. Thompson Valley reservoir held 14,600 a.f. on March first and probably has increased in level since then.

STREAMFLOW

The following forecasts of streamflow in Lake County assume that near average conditions of temperature and precipitation will prevail in the forecast period:

| <u>Stream Station</u> | <u>Period</u> | <u>Acre Feet</u> | <u>Percent Average</u> |
|----------------------------|---------------|------------------|------------------------|
| Silver Creek - Silver Lake | April-July | 7,500 | 39 |
| Chewaucan - Paisley | April-June | 43,000 | 54 |
| Honey Creek - Plush | April-June | 3,400 | 22 |
| Deep Creek - Adel | April-June | 27,000 | 40 |
| Twentymile Cr. - Adel | April-June | 5,000 | 24 |
| Drews Reservoir Inflow | April-July | 7,000 | 20 |

Most other streams have already completed their flows or will cease to flow very shortly.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

| STREAM or AREA | FLOW PERIOD | |
|----------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Chewaucan | Fair | Poor |
| Crooked Creek | Poor | Poor |
| Deep Creek | Poor | Poor |
| Dry Creek | Poor | Poor |
| East Side Goose Lake | Poor | Poor |
| Guano Lake | Poor | Poor |
| Honey Creek | Poor | Poor |
| Lakeview Water Users Assn. | Average | Average |
| Rock Creek (Hart Mtn.) | Poor | Poor |
| Silver-Buck Creeks | Poor | Poor |
| Summer Lake | Poor | Poor |
| Thomas Creek | Poor | Poor |
| Twentymile Creek | Poor | Poor |
| Warner Lakes | Poor | Poor |

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|--|-----------------|---------------------------|-----------|-------------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| Cottonwood | 8.7 | 3.2 | 2.6** | 4.3* |
| Drews | 63.0 | 47.7 | 39.4** | 44.1 |
| Thompson Valley | 17.4 | b | 14.1 | 11.4 ^m |
| *Average for years of record after reconstruction. | | | | |
| **March 22, 1967 | | | | |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

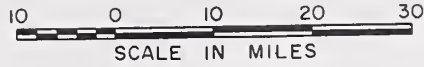
| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT OF AVERAGE ⁱ |
|----------------|---|--------------------|-----------------|-----------------|--|
| NO. | NAME | | | | |
| 3840 | Chewaucan near Paisley | 43 | April-June | 79 | 54 |
| | | 48 | April-Sept. | 88 | 54 |
| 3715 | Deep above Adel | 27 | April-June | 68 | 40 |
| | | 29 | April-Sept. | 72 | 40 |
| 3385 | Drews Reservoir net Inflow ^d | 7.0 | April-July | 35 | 20 |
| | | 7.2 | April-Sept. | 35 | 21 |
| 3785 | Honey near Plush | 3.4 | April-June | 15.6 | 22 |
| | | 3.6 | April-Sept. | 16.1 | 22 |
| 3900 | Silver Creek near Silver Lake | 7.5 | April-July | 19.1 | 39 |
| | | 8.5 | April-Sept. | 21 | 40 |
| 3660 | Twentymile near Adel | 5.0 | April-June | 21 | 24 |
| | | 5.5 | April-Sept. | 22 | 25 |

SOIL MOISTURE

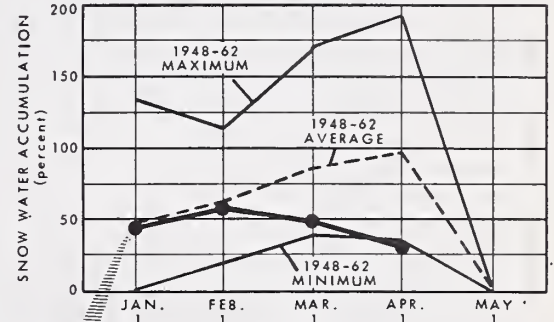
| STATION | | PROFILE (Inches) | | SOIL MOISTURE (Inches) | | | |
|-----------------|-----------|------------------|----------|------------------------|-----------|-----------|-------------|
| | | DEPTH | CAPACITY | DATE | THIS YEAR | LAST YEAR | 2 YEARS AGO |
| NAME | ELEVATION | | | | | | |
| Camas Creek | 5720 | 42 | 14.5 | 3/28 | 12.9 | 12.8 | 12.0 |
| Quartz Mountain | 5320 | 48 | 15.3 | 3/28 | 8.2 | 9.3 | 7.5 |

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

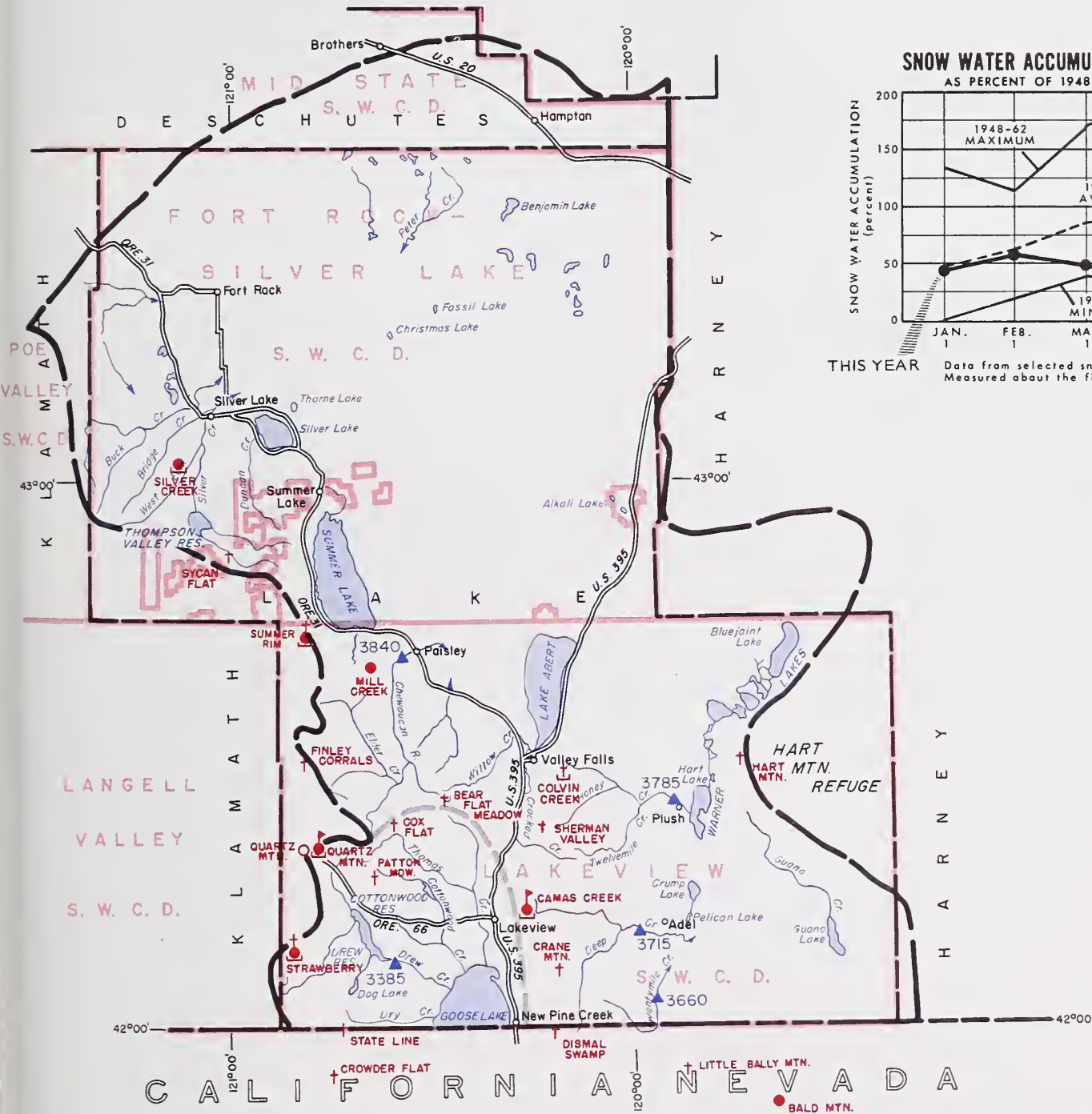
LAKE COUNTY, GOOSE LAKE WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 11
AS PERCENT OF 1948 - 1962 AVERAGE



THIS YEAR Data from selected snow courses. Measured about the first of each month.



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- COPCO Snow Station
- ◡ Soil Moisture Station
- └ Precipitation Gage

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1968

| STREAM or AREA | FLOW PERIOD | |
|--------------------------|---------------|-------------|
| | SPRING SEASON | LATE SEASON |
| Catlow Valley | Poor | Poor |
| Cow Creek | Poor | Poor |
| Donner und Blitzen River | Poor | Poor |
| Mill-Coffeepot Creeks | Poor | Poor |
| Rattlesnake Creek | Poor | Poor |
| Silver Creek | Poor | Poor |
| Silvies River | Poor | Poor |
| Soldier-Prather Creek | Poor | Poor |
| Trout Creek | Poor | Poor |
| Whitehorse Creek | Poor | Poor |

| RESERVOIR | USABLE CAPACITY | MEASURED (First of Month) | | |
|-----------|-----------------|---------------------------|-----------|-----------------|
| | | THIS YEAR | LAST YEAR | 1948-62 AVERAGE |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1968

| FORECAST POINT | | FORECAST THIS YEAR | FORECAST PERIOD | 1948-62 AVERAGE | THIS YEAR AS PERCENT OF AVERAGE ⁱ |
|----------------|------------------------------------|--------------------|-----------------|-----------------|--|
| NO. | NAME | | | | |
| 3960 | Donner und Blitzen near Frenchglen | 15 | April-June | 52 | 29 |
| | | 18 | April-Sept. | 62 | 29 |
| 4030 | Silver near Riley | 3.2 | April-July | 22 | 14 |
| 3935 | Silvies near Burns | 18 | April-June | 96 | 19 |
| | | 20 | April-Sept. | 99 | 20 |
| 4065 | Trout near Denio | 2.7 | April-June | 7.4 | 36 |
| | | 3.0 | April-Sept. | 8.4 | 36 |

SOIL MOISTURE

| STATION | | PROFILE (Inches) | | SOIL MOISTURE (Inches) | | | |
|----------------------|-----------|------------------|----------|------------------------|-----------|-----------|------------------|
| | | DEPTH | CAPACITY | DATE | THIS YEAR | LAST YEAR | 2 YEARS AGO |
| NAME | ELEVATION | | | | | | |
| Blue Mountain Spring | 5900 | 42 | 16.9 | 3/28 | 12.6 | 11.8 | 8.8 |
| Fish Creek | 7900 | 48 | 15.0 | 3/29 | 10.5 | - - | 10.4 |
| Folly Farm | 4450 | 30 | 12.5 | c | | | |
| Silvies | 6900 | 48 | 16.4 | 3/29 | 13.7 | 14.5 | 11.6 |
| Snow Mountain | 6300 | 48 | 16.7 | 4/1 | 12.2 | 15.5 | 12.3 |
| Starr Ridge | 5150 | 36 | 10.6 | 3/28 | 10.5 | 10.5 | 9.0 |
| Stinking Water | 4800 | 48 | 21.9 | b | | - - | 21.4 |
| Willow-Bald | 5000 | 24 | 6.6 | 4/1 | 4.4 | 6.5 | 3.8 ^f |

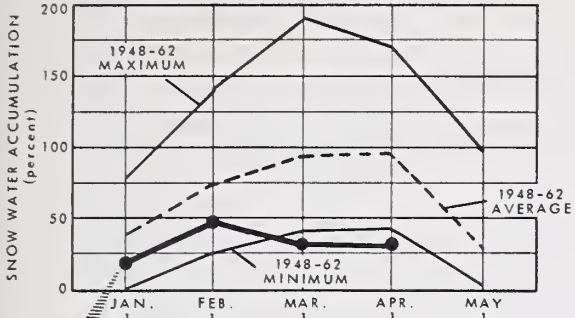
SNOW

| SNOW COURSE | | CURRENT INFORMATION | | | PAST RECORD | |
|----------------------------|-----------|---------------------|---------------------|------------------------|------------------------|-------------------|
| | | DATE OF SURVEY | SNOW DEPTH (Inches) | WATER CONTENT (Inches) | WATER CONTENT (Inches) | |
| NAME | ELEVATION | | | | LAST YEAR | 1948-62 AVERAGE |
| Blue Mountain Springs | 5900 | 3/28 | 23 | 8.8 | 16.4 | 17.3 |
| Buck Pasture ^e | 5700 | 3/29 | 0 | 0.0 | 0.0 | - - |
| Buckskin Lake ^e | 5200 | 3/29 | 0 | 0.0 | 0.0 | - - |
| Call Meadows ^e | 5340 | 3/29 | 0 | 0.0 | 1.4 | - - |
| Crow Camp ^e | 5500 | 3/29 | 0 | 0.0 | T | - - |
| Delintment Lake | 5600 | 4/1 | 0 | 0.0 | 7.0 | 9.0 ^h |
| Denio Creek ^e | 6000 | 3/29 | 0 | 0.0 | 0.0 | - - |
| Disaster Peak (Nev.) | 6500 | 3/25 | 4 | 1.2 | 10.6 | 11.7 ^h |
| Emigrant Butte | 5000 | 4/1 | 0 | 0.0 | 3.4 | 2.4 ^h |
| Fish Creek | 7900 | 3/29 | 42 | 15.2 | 26.6 | 26.9 |
| Hart Mountain ^e | 6350 | 3/27 | 0 | 0.0 | 0.3 | 1.2 ^m |
| Idlewild Camp | 5200 | 3/29 | 0 | 0.0 | 7.8 | 5.2 |
| Izee Summit | 5293 | 3/28 | 0 | 0.0 | 7.0 | 8.8 |
| Lake Creek | 5120 | 3/28 | 7 | 2.2 | 10.1 | 11.2 ^h |
| Martin Creek (Nev.) | 6700 | 3/27 | 13 | 4.8 | 12.3 | 8.8 ^h |
| Oregon Canyon ^e | 6950 | 3/29 | 0 | 0.0 | 7.0 | - - |
| Rock Spring | 5100 | 3/29 | T | T | 5.0 | 5.2 |
| Silvies | 6900 | 3/29 | 5 | 2.5 | 16.4 | 14.0 |
| Snow Mountain | 6300 | 4/1 | 9 | 3.2 | 15.6 | 14.7 |
| Starr Ridge | 5150 | 3/28 | 0 | 0.0 | 4.2 | 5.3 |
| Stinking Water | 4800 | 4/1 | 0 | 0.0 | T | 0.9 ^h |
| Trout Creek ^e | 7800 | 3/29 | 6 | 2.4 | 12.6 | - - |
| "V" Lake ^e | 6600 | 3/29 | 0 | 0.0 | 3.2 | - - |

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

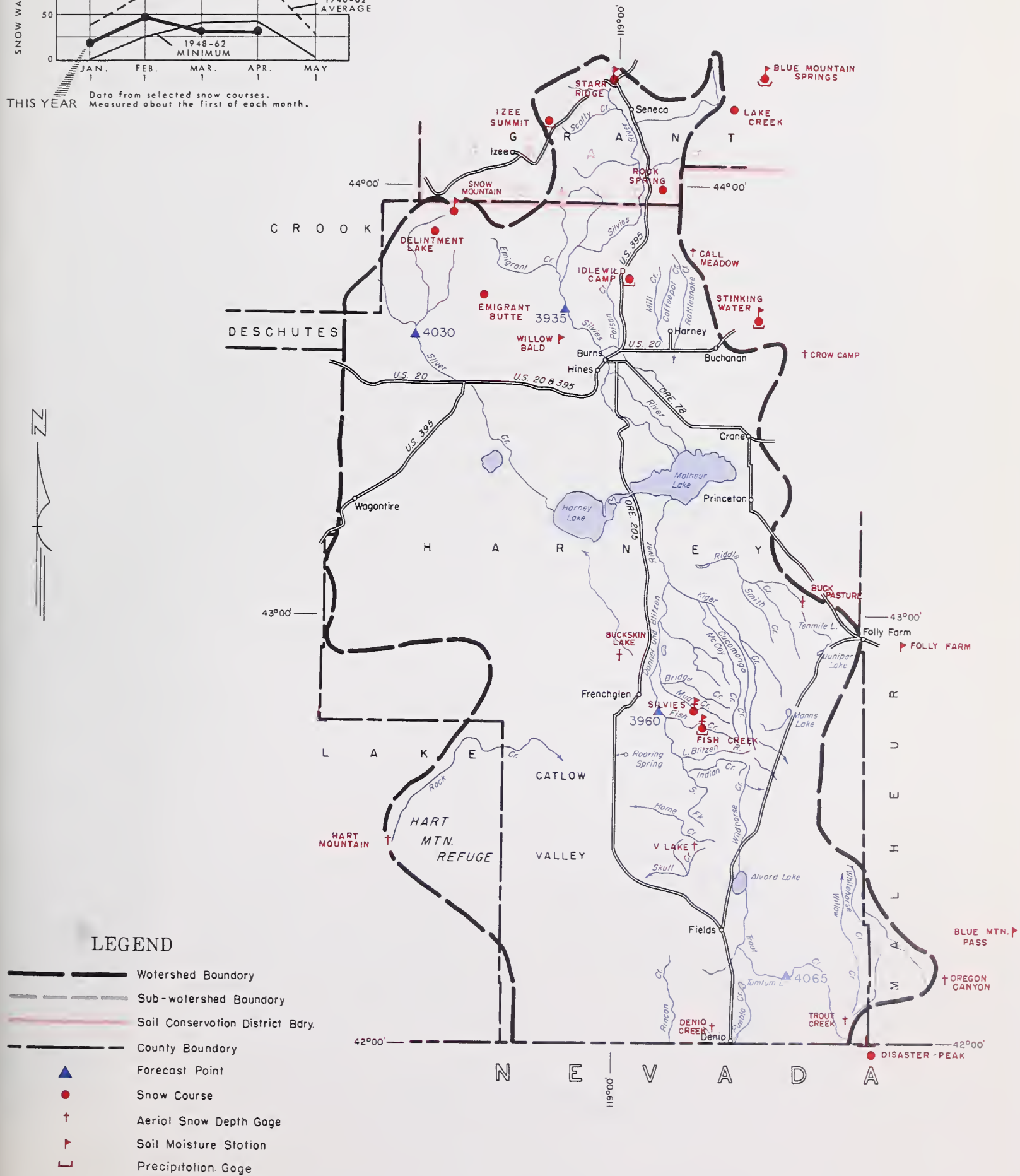
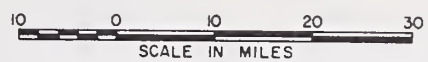
HARNEY BASIN WATERSHEDS

SNOW WATER ACCUMULATION IN AREA 12
AS PERCENT OF 1948 - 1962 AVERAGE



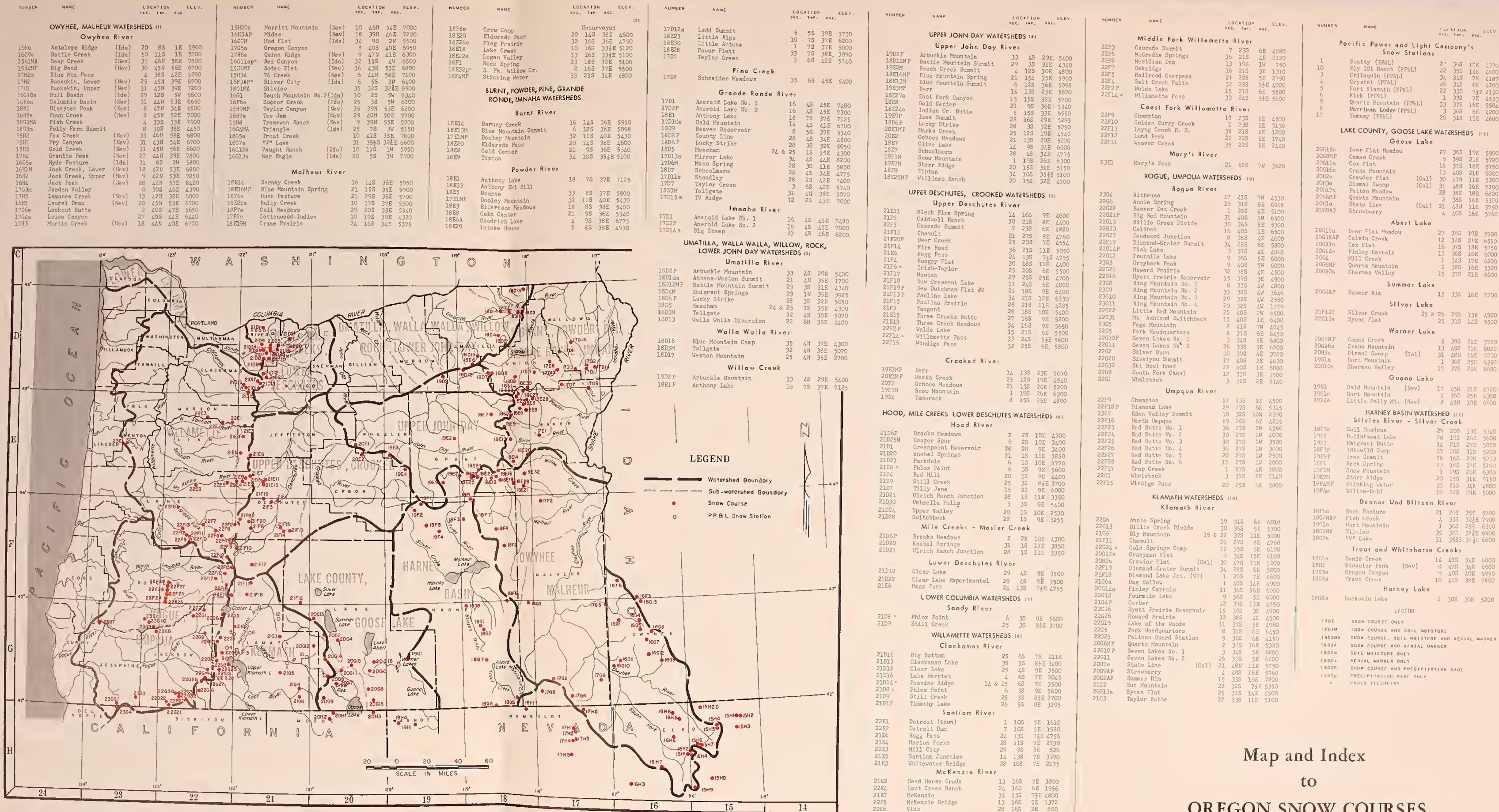
Data from selected snow courses.
Measured about the first of each month.

THIS YEAR



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ▶ Soil Moisture Station
- ⌈ Precipitation Gage



The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - Weather Bureau
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
 - National Park Service
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

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SOIL CONSERVATION SERVICE
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with the Snow Survey"*